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Sedimentation Bulletin Number 5 August 1953

SUMMARY OF RESERVOIR SEDIMENTATION SURVEYS FOR THE UNITED STATES THROUGH 1950

Compiled under the auspices of Subcommittee on Sedimentation

Federal Inter-Agency
River Basin Committee

Prepared under the supervision of the Corps of Engineers
Department of the Army

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SUMMARY OF RESERVOIR SEDIMENTATION SURVEYS

MADE IN

THE UNITED STATES

THROUGH 1950

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THE CORPS OF ENGINEERS, DEPARTMENT OF ARMY
in cooperation with the following agencies represented on the
Subcommittee on Sedimentation
Federal Inter-Agency River Basin Committee

DEPARTMENT OF AGRICULTURE
Forest Service
Soil Conservation Service

DEPARTMENT OF COMMERCE 'Coast and Geodetic Survey

DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
Geological Survey

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE Public Health Service

FEDERAL POWER COMMISSION

TENNESSEE VALLEY AUTHORITY

Copies are available for limited distribution at the Washington office of each of the agencies listed above.

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NOTE

This bulletin is the fifth of a series issued by the agencies represented on the Subcommittee on Sedimentation. The series is intended as a medium for dissemination of the results of specific work projects of the subcommittee, and for general information on work being undertaken in the sedimentation field by the agencies on the subcommittee.

Copies of these bulletins may be obtained, for administrative use only, from agencies listed as subcommittee members. Bulletins previously issued by the Subcommittee on Sedimentation are listed as follows:

Bulletin No. 1 - - - INVENTORY OF PUBLISHED AND UNPUBLISHED SEDIMENT-LOAD DATA IN THE UNITED STATES

April 1949

Bulletin No. 2 - - - ANNOTATED BIBLIOGRAPHY ON SEDIMENTATION

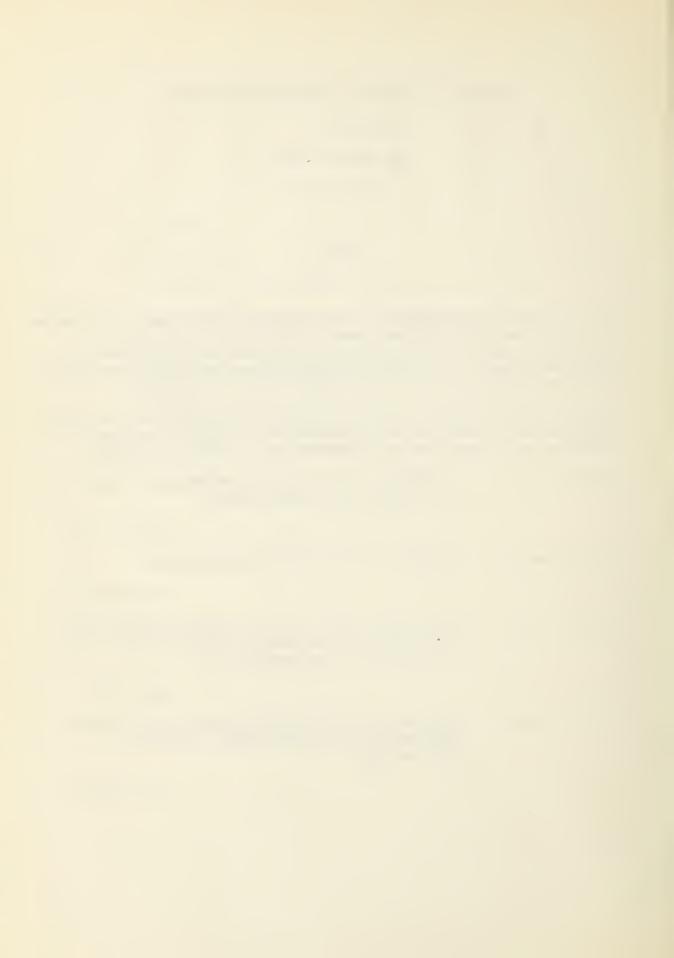
February 1950

Bulletin No. 3 - - - PRELIMINARY CHECK LIST OF RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES TO APRIL 1, 1950 (Superseded by Bulletin No. 5)

May 1950

Bulletin No. 4 - - - INVENTORY OF PUBLISHED AND UNPUBLISHED SEDIMENT LOAD DATA IN THE UNITED STATES SUPPLEMENT 1946 to 1950

April 1952



SUMMARY OF RESERVOIR SEDIMENTATION SURVEIS MADE IN THE UNITED STATES THROUGH 1950

FOREWORD

This bulletin, together with the appendix, is a presentation of the results of all known, reliable, sedimentation surveys made in the United States through 1950. The purpose of the bulletin is to make readily available the more pertinent data on reservoir sedimentation which would otherwise remain in the archives of the agencies making the surveys. Included in the bulletin is a summary table listing the names of the reservoirs on which sedimentation surveys have been made, together with information relative to location, drainage area, rate of sediment accumulation and related information of general interest. Information has been assembled on 528 reservoirs in the country. These reservoirs are located in all but 12 states, the exceptions being Delaware, Florida, Louisiana, Michigan, New Jersey, North Dakota and the six New England states. In addition to the data on storage reservoirs and stock ponds some information is included on debris basins.

The appendix contains detailed information on each of the reservoir surveys listed in the summary table. The appendix is not being distributed to all recipients of this bulletin because of its bulk and because the detailed information is not of general interest. However, copies of the appendix are available for inspection in the Washington, D. C., offices and in many of the field offices of the agencies represented on the Subcommittee on Sedimentation. Copies may also be obtained on a loan basis from these agencies.

An example of the form of presentation of the detailed information contained in the appendix is given on pages 29 and 30 of this bulletin. A similar data sheet is included in the appendix for each reservoir listed in the summary table.

The basic data vary in relative accuracy. The surveys range from reconnaissance measurements of depth of deposition at a few locations in a reservoir to detailed surveys which include frequent cross sections or complete contour mapping. No classification of relative accuracy has been attempted in this bulletin.

It is anticipated that the results of new surveys or resurveys of reservoirs will be presented from time to time as supplements to this bulletin. Revised sedimentation data sheets for these reservoirs will also be distributed to recipients of the appendix so that copies of the appendix may be kept up to date.

It is hoped that the information in this bulletin and in the appendix will prove useful to many engineers in public and private practice who are interested in problems of reservoir sedimentation. It is also hoped that private engineers and engineering firms and local government agencies who have data on similar reservoir surveys will make this information available to the subcommittee for inclusion in supplements to this bulletin.

Work Group on Sedimentation in Reservoirs
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Robert F. Kreiss, Corps of Engineers
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A CKNOWLEDGEMENTS

The preparation of data sheets in the form required for the appendix has been accomplished by the efforts of personnel in many offices of Federal, State, and local agencies. The initial phase of inaugurating the data collection program and final phases of compiling data for the summary table in the bulletin, preparing typed sheets for the offset reproduction, and the cost of reproduction have been undertaken by the Washington, D. C., offices of the agencies listed on the title page. The efforts of the field offices which have been primarily responsible for the collection of data are gratefully acknowledged.

EXPLANATION OF THE SUMMARY TABLE

Data in the summary table of the bulletin have been obtained from the reservoir sedimentation data sheets contained in the appendix. Dashes in columns of the table signify absence of data, or that the column is not applicable for the reservoir.

Reservoirs are grouped according to the 79 drainage areas into which the United States has been divided as shown in the publication, "River Basin Maps Showing Hydrologic Stations," compiled under the auspices of the Subcommittee on Hydrology, Federal Inter-Agency River Basin Committee. An index map of these drainage areas is shown on page 31 of this bulletin. In the summary table of this bulletin, the drainage areas in which the reservoirs are located are shown as subheadings. The first of the two numbers identifying a reservoir indicates the drainage area in which it is located. The second number denotes the particular reservoir in the drainage area and is based upon the order in which the data were prepared. When a revised form is prepared for a reservoir, it will be shown alphabetically, for example 70-2a, then 70-2b, etc.

Total drainage area includes the reservoir area and the area lying above all upstream dams but generally excludes non-contributing drainage areas lying within the basin boundary. Where available, the drainage area figure published by the U. S. Geological Survey in Water Supply Papers is used. The net drainage area is the net sediment-contributing area and excludes the reservoir area and the drainage areas above the upstream reservoirs which are effective sediment traps.

The length of record pertains to the period of sediment deposition prior to the date of survey. The initial date does not appear in the table but generally is that representing the initial storage of water, including all or a part of the period of diversion if the trap efficiency was appreciable in that period. In other cases the initial date represents the date of the contour or range survey made after the reservoir was in operation for some time.

The average annual runoff is that for the period shown in the column "Length of Record."

The capacity-watershed ratio (C/W) is derived from the initial total storage at the level of the crest of an ungated spillway or the top of gates (less gate-height freeboard, if any) of gated spillways. The watershed area is the entire flow-contributing drainage area. A dash is shown if upstream reservoirs which have a C/W ratio of more than 25 acre-feet per square mile control more than 25 percent of the drainage area.

The specific weight of deposited sediment is an average or weighted value for the reservoir, determined generally from samples of deposits. In view of the variations of specific weight with depth of the sample and with the location in the reservoir, the determination of a mean specific weight is generally an approximation for the reservoir. If the entry is marked by an asterisk, the specific weight is not obtained from measurements but is assumed or is calculated from field data of the size-frequency grading of the deposits and a chart relating size-frequency with specific weight.

The annual storage loss is determined from the average annual volume of sediment deposition in respect to the initial total storage. In a few cases that are noted, the loss rate applies to a lesser storage corresponding either to a reservoir elevation not exceeded during the period of record or to the limiting upper elevation of the sedimentation survey.

The rate of sediment accumulation pertains to sediment deposited in the reservoir below the full pool elevation but does not include the sediment deposited in deltas above full pool level or sediment discharged from the reservoir. The sediment concentration in parts per million by weight is computed from the measured volume and specific weight of deposits below full pool level and from the quantity of inflowing water-sediment mixture for the period. It was assumed that all of the deposited sediment was transported into the reservoir by flowing water.

FORM FOR REPORTING RESERVOIR SEDIMENTATION

On pages 29 and 30 of this bulletin is a completed sample of the reservoir sedimentation data sheet from the appendix. This sheet is a convenient and standard form for reporting results of surveys. An invitation is extended herewith to readers, particularly those practicing engineering individually, in engineering firms, or in local government agencies, to prepare sheets covering surveys known to them but not included in this bulletin. A blank form is inclosed as a tear sheet of this bulletin and additional forms may be obtained from the Washington offices of the agencies listed on the title page or the form may be reproduced if desired. The completed forms may be sent to any one of the agencies represented on the Subcommittee on Sedimentation for inclusion in supplements to this bulletin.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

SEDIMENT CONCEN- TRATION	BY WT
INITIAL SPECIFIC AVERAGE AVERAGE ANNUAL SEDIMENT CAPACITY- WEIGHT IN ANNUAL MATERSHED LES PROTORAGE ACCUMULATION PER TRATION RATIO FER 1055 IN SQUARE MILE IN PROM	AC FT TONS
AVERAGE ANNUAL STORAGE LOSS IN	PERCENT
SPECIFIC WEIGHT IN LBS (DRY)	CU FT
INITIAL CAPACITY- WATERSHED RATIO	IN AC FT PER SQ MI
AVERAGE ANNUAL RUNOFF	IN ACRE FEET
LENGTH OF RECORD	YEARS
DATE	200
DRAINAGE AREA IN SQUARE MILES	NET
DRAINA IN SQUAR	TOTAL
NEAREST TOWN	
STREAM	
RESERVOIR	
DATA	E S S S S S S S S S S S S S S S S S S S

ST. JOHN, MACHIAS, PENOBSCOT, KENNEBEC, ANDROSCOGGIN, AND PRESUMPSCOT RIVER RASINS

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2-

HOUSATONIC, CONNECTICUT, THAMES, AND MERRIMACK RIVER BASINS

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	0.07		0.28 0.09 0.04 0.03 0.63		0.20	3.19	90.1	0.08	0.03		1.60 H/	0.79	0.71	9-0	0.78	0°e3 5/	0.90
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E ORAI		RIVER	1943 1941 1941 1941 1939	JAMES		1938		1950 1940		APE FE					1961		949
LAWRENC	May 1950	LAWARE	Oct Oct May May May May	RK, AND	Feb	Feb	A ug	Oct A		, AND C	Jun 1941 May 1938	Aug					Sep
N AND ST.	312.3	SUSQUEHANNA AND OELAWARE RIVER BASINS	299.4 77.5 3.0 34.5 42.6 4.9	ANNOCK, YO	14.3	27.0	4.988 336.4	80.1 4 <u>2</u> /	59.6	TAR, WEUSE	4.0	73.4	62.3	3.73	7.52	7.52	397
HUOSON RIVER BASIN AND ST. LAWRENCE ORAINAGE IN NEW YORK	314	SUSQUEHA	303 80 3.2 34.8 42.9	POTOMAC, RAPPANANNOCK, YORK, AND JAMES RIVER RASINS	14.5	27.0	337	#• 18 64	0.09	CNOWAN, ROANOKE, TAR, NEUSE, ANO CAPE FEAR RIVER BASINS	4.0	74.1	62.8	3.75	7.62	7.62	105.2
HO	Prattsville, M. Y.		Towson, Md Nereford, Md Scranton, Pa York, Pa Scranton, Pa		Alexandria, Va	Silver Spring, Md. Berwyn, Md	Manassas, Va	Ashton, Md	Cumber land, Md	5	Apex, N. C Franklinton, N. C.	Greensboro, N. C	00bam N.	Sanford, N. C	Roxboro, N. C	Burlington, N. C	Walnut Cove, N. C.
	Schoharie Cr		Gunpowder Falls R. Guriffin Cr Roaring Rrk Codorus Cr		Holmes Run	NW Br, Anacostia R Trib. of Indian Cr	Occoquan Cr	Patuxent R	Evitts Cr		Swift Cr Sallie Keaney Cr.,	Reedy Fk	Flat R00	Lick Cr.	Satterfield Cr	Stony Cr	oan R
	Schoharie (Gildoa Oam)! Schoharie Cr		Lock Raven Prettyboy Griffin. Elmhurst Lake Williams		Barcroft	Greenbelt Lake	Jackson	(Brighton Oam) Gordon Lake	Thomas W. Koon Lake.		Lake ApexFranklinton	(Lake Brandt)	Take Michie	Sanford City	Roxboro City Lake	Surlington Municipal	Walnut Cove
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	0.55 0.417 0.412 0.418 0.324 0.324 0.302 0.024 0.019 0.019 0.019 0.019	0.696 0.696 0.696 0.414	2.22 1.33 0.408			1.08	1.20 0.66 0.089 0.479
	1.29 1.61 1.61 0.84 1.2 0.53 0.53 0.65 0.46 0.46 0.46 0.46	0.39	1.67			0.38	0.28 1.29 1.04 0.52 0.10
		38°0 45°5 45°5	8°63 8°63 8°63			°0°°	63.7
	42 25.7 38.4 38.4 40 32.4 114 2.6 1.10 4.10 73.6 16.3 2.64	3.0 3.0 68.4 68.4	131 131 79.6			276 276	556 81.9 63.8 17.2 457
		1111	111	ASINS		11	HASINS 11,240,300
RASINS	11. 8.2 8.2 8.2 30 30 15.5 11.0 7 8 7 7 8	19.8 11.75 ₩.6 15.7	VER BASINS 2.9 11.4 24.3	NNEE RIVER 9		R 8ASINS 13.4 20.7	AMA KIVEK BA 10.0 9.2 6.3 22.3 11,
DISTO RIVER	Oct 1937 Jun 1938 Jul 1934 Mar 1947 Jul 1934 Jul 1934 Mar 1940	Sep 1939 Mar 1940 Apr 1940 Mey 1951	ALTAMAHA RI Apr 1941 Oct 1949 Mar 1935	S, AND SUWA	OA ORAINAGE	DCKONEE RIVE NOV 1937 Feb 1945	A, AND ALAK Jul 1939 Nov 1938 Jun 1937 May 1936 Nov 1935
PEE OEE, SANTEE, AND EOISTO RIVER RASINS	15,92 9,34 90,8 90,8 90,8 32,8 3,25 1,7,7 1,54 1,54 1,54 1,54 2,53 2,34 25,34	27.26 431 6.66 6.66	SAVANNAH, OGEECHEE, ANO ALTANAHA RIVER BASINS 14.02 13.84 Apr 1941 2.9 14.02 13.86 Oct 1949 11.4 1.414 1.407 Mar 1935 24.3	YS, ST. JOHN	SOUTHERN FLORIOA ORAINAGE	APALACHICOLA ANO OCHLOCKONEC RIVER BASINS 1.39 1.34 Nov 1937 13.4 1.39 1.34 Feb 1945 20.7	LLOW, ESCAMBI .51 .0 .6 .6 .0 .0 .0
PEE OEE, S	16.05 9.40 9.40 9.43 9.43 9.43 9.43 9.43 9.43 9.43 9.43	27.68 4.600 6.75 6.75	SAVANNAH, 06 14.02 14.02 1.414	SATILLA, ST. MARYS, ST. JOHHS, AND SUMANNEE RIVER 9ASINS	08	APALACHICO 1.39 1.39	CHOCIAWHAICHEE, YELLOW, ESCAMBIA, AND ALAMAMA NIVEN BASINS. 1.60 1.51 Jul 1339 10.0 1.2 46 11.0 Nov 1938 9.2 1.6 Jun 1337 6.3 1.7 40.22 Nov 1935 22.3 11.240.3
	Chester, S. C. C. Lancaster, S. C. C. Fingerville, S. C. Greer, S. C. M. C. M. C.	Winston-Selem, M. G. Glead, N. C. Lexington, N. C.	Clemson, S. C 00 Jackson, Ge	A.S.		мемпал, Ge	CHOCT Jasper, Ga Cartersville, Ge Arbburn, Ala Clanton, Ala Birminghem, Ale
		Salem Cr	Six Mile Cr			8olton Mill Gr	Smell Brs
	Chester Lencater Denaster On Appelechie Albemarie City Lake Connon Leke Lake Concord Entwissie No.3 Entwissie No.3 Entwissie No.9 High Rock	Selem	Leke Issegueene 00 Lloyd Shoals			Newnan	Seguoyah,
	7-1 7-2 7-3 7-5 7-7 7-8 7-10 7-10	7-1-7-1-6	8-1	ģ	-0	Ξ	12-1 12-3 12-4 12-4

7

Includes estimeted 112 ecre feet passing through Shandeken Tunnel.
 Koon Leke, unetreem, was built in 1932.
 Based on total sediments in both Gordon Lake and Koon Lake.
 Based on total of 7.4 acre feet of sediment remaining in reservoir; 0.2 acre foot of sand removed in 1933.
 Excluding 2.04 ecre feet of sediment dredged from lake in March 1942.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

ENT ION FM]			, ,		1111		
SEDIMEN CONCENTRATION IN PPM BY WT								2.800
AVERAGE ANNUAL SEDIMENT ACCUMULATION PER SQUARE MILE AC FT TONS			12.0 40.3 18.200 20.000 10.700 18.200 27.500 27.500 27.800 10.800 4.800 6.520	9.040	30,400 44,600 3,530 3,060 4,070 21,300 2,370 913	7.200 2.120 3.420		1.860 254 471 784 5.070 4,370 3.180
	1.34		0.11 0.37 15.3 7.78 12.4 12.4 12.4 8.03 5.52	6.55	16.8 26.0 3.13 2.39 3.35 20.5 2.61 3.14	4.89 1.95 3.60 0.630		1.133 0.213 0.338 0.600 3.15 2.64 2.18 2.18
AVERAGE ANNUAL STORAGE LOSS IN PERCENT	0.81		0.10 0.04 3.03 3.03 7.61 5.00 6.34 7.30 6.16 0.96 2.82	0.62	8.54 12.9 1.09 0.98 0.98 1.41 9.62 1.08 0.40	3.43 0.93 0.89 0.114		2.12 0.45 0.78 0.63 0.63 0.57 0.37 1/
SFECIFIC WEIGHT IN LBS (DRY) PER CU FT			50 8 8 4 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	63.3	83.0 78.8 51.8 58.7 55.7 47.7 41.8 52.0	67.6 4.9.9 7.5.1		75.4 54.8 64.8 776.9 776.9
LETTIAL CAPACITY— WATERSHED RATIO IN AC FT PER SO MI	164 80.7		110 803 150 192 149 184 177 737 737 186	788	185 267 267 2217 221 187 262 382	136 195 357 525		52.3 46.3 42.9 42.9 40.8 37.8 39.9 1/ 39.9 1/
AVERAGE ANNUAL RUNOFF IN ACRE	S	vouth) sins HEZ)		1 1		521,400	EWA)	6 18/sq mi a
LEMGTH OF RECORD IN YEARS	1VER 8ASI 24.6 6.75	River 8a TO NATC	12.6 12.6 14.1 17.2 17.3 17.5 17.6 19.0	35	2.7 2.3 2.3 4.5 14.2 14.2 6.0	3.7 5.5 5.2 6.3	ER TO HEL	8.8 10.0 20 22.1 30.0 29 10.1 22.9
DATF OF SURVEY	ANO PEARL R Dec 1935 Nov 1935	SIP (NATCHE d Vermilion d Vermilion d Vermilion d Vermilion	May 1950 Nay 1950 Jan 1951 Jan 1951 Jan 1951 Jan 1951 Feb 1951 Feb 1951	Feb 1951 Feb 1951	Feb 1951 Feb 1951 Feb 1951 Mar 1951 Mar 1951 Mar 1951 Mar 1951	Mar 1951 Mar 1951 Mar 1951 Dec 1947	ASIH (CHEST River Basin	Jul 1939 Jul 1939 Jul 1939 Jul 1939 Jul 1948 Oct 1949 Oct 1949 Seb 1936 Jul 1949
AREA MILES NET	TOWRIGSEE, PASCAGOULA, AND PEARL RIVER BASIMS 72.3 71.6 Dec 1935 24.6 30.0 29.8 Nov 1935 6.75	WER HISSISSIPPI RIVER BASIM (MATCHEZ TO THE MOUTT Calcasieu, Mermentau, and Vermilion River Basins OWER MISSISSIPPI RIVER BASIM (HELEMA TO MATCHEZ) Uazoo, Big Black, and Ouachita River Basins	1,413.4 May 1,13.4 May	0.0389	0.0279 0.0320 0.2196 0.0118 0.0210 0.1289 0.8131	0.0264 0.1458 0.0566 948	IPPI RIVER B St. Francis	0.45 1.85 3.56 2.77 2.76 0.206 3.75 3.75
DRAINAGE AREA IN SQUARE MILES TOTAL NET	TOWRIGREE, 72.3	LOWER HISSISSIPPI RIVER BASIM (MATCHEZ TO THE MOUTH) Calcasieu, Mermentau, and Vermilion River Bacins Calcasieu, Mermentau, and Vermilion River Bacins LOWER HISSISSIPPI RIVER BASIM (HELEMA TO MATCHEZ) Uazoo, 8ig 8lack, and Onachita River Basins	1,421 43.0 0.097 0.0625 0.0478 0.0833 0.0153 0.0153 0.0153 0.0153	9510.0 9210.0	0.0297 0.0342 0.2633 0.0075 0.0450 0.0339 0.1375 0.8672	0.0278 0.1563 0.0644 1.000	LOWER MISSISSIPPI RIVER BASIH (CHESTER TO HELEWA) St. Francis River Basin	0.46 1.90 3.99 3.00 0.21 0.23 8.40 8.40
NEAPEST TOWN	Birminoham, Ale		Hot Sorings, Ark Little Rock, Ark Bolly Sorings, Wiss. Slaydon, Miss Slaydon, Miss Holly Sorings, Miss. Holly Sorings, Wiss. Holly Sorings, Wiss. Olive Branch, Miss.	Warsaw, Miss	Victoria, Miss. Helly Sorings, Miss. Mort Lake, Miss. Oxford, Miss. Taylors, Miss. Oxford, Miss. Oxford, Miss. Eatesville, Miss.	Holly Springs, Miss. Arkabutla, Miss Eudora, Miss Arkabutla, Miss		Sismark, Mo. Patterson, Mo. Ironton, Ko. Earlington, Ky. Carbondale, Ill. Eldorado, Ill. West Frankfort, Ill.
STREAM	Village Cr		Adum K. Saline R. Trib of Chewalla Cr. Trib of Coldwater R. Trib of Camo Cr. Trib of Camo Cr. Trib of Camo Gr. Trib of Camo Gr. Trib of Camo Gr.	Trib of Red Banks Cr.	Trib of Buhalla Cr Trib of Guffaya Cr Trib of Missission: Trib of Tobitubby Cr. Trib of Yocna R Trib of Yocna R Trib of Sarter Cr Trib of Parter Cr	Trib of Arkabutla Cr. Trib of Arkabutla Cr. Trib of Hurricane Cr. Coldwater R.		Lost Creek Trib of Rings Cr Trib of Stouts Cr Brown Cr Brown Cr Frib of Wolf Cr Wolf Cr Tillev Cr
RESERVOIR	Sayview Lake Harris		Lake Minona. 10. P. White Pond. 11. Homesucker Pond. 12. S. Hurdle Pond. 13. Hurdle Pond. 14. Anexader 17. A Alexander 18. Shood and. 19. L. Patton Pond.	Pond				Grisham. Mountain Lake Sheard Mountain Loch Mary Carbondale Derino Coal Co. Pond. Eldorado. West Frankfort
DATA SHEET NUMBER	13-1	<u>+</u>	26-26-26-26-26-26-26-26-26-26-26-26-26-2	15-13	5-12 5-18 15-20 15-20 15-20	,		16-2 16-3 16-4 16-4 16-5 16-7 16-8

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1,870 4,310 825 174		536 1,720 38 1,420 213 2,760		7. 533 984 7/ 962 7/ 900		4, 860 181 181 181 181	
1.43 0.583 0.133 0.041		0.617 1.97 0.023 0.975 0.140 1.75		0.660 0.667 0.667 1.280 1.280 0.853 0.853 0.853		2.50 g/ 0.191 0.037 0.035 0.036 0.038 0.894 0.471 4.46 2.13 0.184 0.184	
0.65 0.65 3.41 0.83		0.28 0.08 0.27 2.90 1.14 1.29		60000000000000000000000000000000000000		9.00 0.00	
000000000000000000000000000000000000000		40° 40° 75° 67° 72° 70°		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		777.	
13.9 55 16.7 147		204 1,898 8,7 12.2 13.3 32.4 4/		625 83.7	ø	570 479 479 393 4.3 0.04 0.04 512 512 240 6.79	
583/sq mi*	Ę.	774/sq mi* 806/sq mi* 507/sq mi* 540/sq mi* 532/sq mi*	ОАН.)	23, 971, 888 26, 276, 338 27, 276, 338 34, 253, 594 34, 253, 594 36, 056, 995 36, 37, 724 37, 760, 934 51, 760, 934 51, 760, 934 51, 760, 934 51, 760, 934	ONIO RIVER BASIH (POINT PLEASANT TO MAOISON) Kanawha, Biq Sandy, Licking, Kentucky, Scoito, and Miami River Basins	565/sq mi* 648/sq mi* 648/sq mi*	
7 9 10 29 7.0	O UNIONTO	46.3 19.0 17.2 9.9 13.1 6.4 25.3	ALES BAR (r Basins	25.7 34 18.8 30.7 1.8 1.8 1.0 7.6 7.6 12.6 22.4 27.1 8.6 13.3	T TO MAO!	38.9 2.6 2.6 6.6 6.7 7.2 2.3 7.7	
1939 1938 1938 1938 1939	(MADISON TO UNIONTOWN River Basin	Oct 1940 Sep 1940 Aug 1940 /Sep 1948 Sep 1948 Sep 1940 Oct 1940	IN (BELOW HAL Green River	Nov 1940 Jan 1941 Jan 1947 Aug 1947 Nov 1947 Jun 1947 Jun 1947 Jun 1947 Oec 1936 Sep 1946 Jun 1951 Sep 1946 Aug 1946 Aug 1946 Aug 1951	INT PLEASAN tucky, Scoi	Sep 1941 Jul 1944 1942 1942 Jun 1939 Mov 1939 0cc 1947 0ct 1947 1937 May 1936 Mov 1934 Dec 1942	
0.07 0.06 0.08 51 1,206	ONIO RIVER BASIN Wabash	0.63 0C 0.40 Sel 1.698 Aur 5.29 3/Se 25.0 Se 1.38 Sel 266 0C	TENKESSEE RIVER BASIM (BELOW MALES BAR OAM) Cumberland and Green River Basins	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ER BASIN (PO Licking, Ken	229 639 639 639 264 1,052 24 24 24 24 24 24 1002 1310 1310 1310 1310 1310 1310 1310	
0.63 0.56 0.49 1.310	ONIO	0.67 0.54 1,700 15.03 25.1 1.41	TEMMESS	2.1 1.675 21,450 21,450 21,450 29,590 30,750 30,750 30,750 30,750 30,750 30,750 30,750 40,200	ONIO RIV na, Biq Sandy,	0.2 659 659 1,063 1,063 23 23 33.4 437 1,310 1,310 1,310 1,310	
Farmington, Mo Farmington, Mo Amapolis, Mo Poplar Bluff, Mo		Huntinobura, Ind Oakland City, Ind Monticello, Ind Hitchell, Ind Xenia, Ill Charleston, Ill		Mashville, Tenn Mokinsvilla, KV Rock Island, Tenn Guntersville, Ala Town Greek, Ala Florence, Ala Florence, Con On On Florence, Con On	Kanawh	Radford, Va. Radford, Va. Badford, Ohio. Germantown, Ohio. Gerlmbus, Ohio. Columbus, Ohio. Waverly, Ohio. Harrodsburg, Ky. Wallesby, Va. Columbus, Ohio.	
South FK Jonaca Cr South FK Jonaca Cr South FK Jonaca Cr Suith FK Jonaca Cr St. Francis R		So. FK. Patoka R Tippscance R Mill Creek Connor's Branch Trib. of Embarrass R.		Other Creek. (Little River (Lone Fork. Donessee R Tennessee R		Unnamed Stream Liltte River. Sillwater R. Twin Greek Sefoto R. Blacklick Greek	
Pineview (Lowar) Pineview (Widdle) Pineview (Upper) Killarnay		Huntingburg (Upper) Oakland Citv ≥2 Shafer Lake Spring Hill Greendale Lake Ridge Lake		Radnor Lake Like Jandy Great Falls Guntersvills Wilson Wilson Pickwick Landing Kentucky		Radford Agadical Agad	
16-9 16-10 16-12 16-13		17-1 17-2 17-3 17-4 17-6 17-6		18-7 18-7 18-7		00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

Spillway crest raised from 439 ft. m.s.1. to 441.77 ft. m.s.1. in April 1943. All data computed on basis of 441.77 ft. at spillway elevation. He self-anniar to 1949. The 33.3 acree feet of sediment densited prior to 1936 had compacted, due to exposure to 75.7 acre feet. In how contributing dariance acre is chiefly closed, or pluaged lineatone sinkhold. Compacted, due to exposure to 75.7 acre feet. In July 1925. In June 1915. Spillway elevation was 5 feet lower and c/w ratio was 4.6. Sediment contributing acar endeed by closing where to 3 1936, to 1155 sq. mi. Sead on cripinal volume in the reach from Wilson Dam to Wheeler Dam and to the elevation of top of gates after being raised in 1942. Sased on drainage area below Hales Bar Dam (8,135 sq. mi.) Estimated or assumed. **一名を中国の下面。**

9

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

CEN-TION PPM WT

	SEDIMENT CONCEN- TRATION IN PPM	BY WT		175 4 175 175 175 175 175 175 175 175 175 175	3,200.
	ANNUAL MENT TION PER	TONS		2974.4 2074.4 2074.4 1.056.8 1.056.8 1.053.3 1.053.3 1.46.3 2.967.3 2.967.3 2.967.3 2.967.3 2.967.3 2.967.3 2.967.3 2.967.3 2.967.3 2.967.3	321 1.250 1.755 5.33 5.33 5.34 9.37 9.37 9.37 9.37 1.579 1.579 1.579 1.579 1.579 1.579 1.500
	AVERAGE ANNU SEDIMENT ACCUMULATION SQUARE MILE	AC FT		0.2948 0.252 0.245 0.245 0.245 0.246 0.340 0.340 0.376	0.227 0.89 0.1408 0.237 0.237 0.097 0.067 0.067 0.318 0.138 0.138
0061	AVERAGE ANNUAL STORAGE LOSS IN	PERCENT		$\begin{array}{c} 0.054 \\ 0.054 \\ 0.16 \\ 0.16 \\ 0.16 \\ 0.092 \\ 0.073 \\ 0.055 \\ 0.031 \\ 0.055 \\ 0.095 \\ 0.$	0.05 0.113 0.113 0.129 0.12 0.12 0.13 1.29 1.29 1.29 1.29 1.29 1.29 1.29 1.29
напоми	SPECIFIC WEIGHT IN LBS (DRY) PER	CU FT			200 200 200 200 200 200 200 200 200 200
SIAIES	INITIAL CAPACITY- WATERSHED RATIO	IN AC FT PER SQ MI		1, 208 1, 218 1, 371 1, 371	7 731 7 731 7 731 8 20 7 72 9 72 9 72 117 117 117 117 117 117 117 117 117 1
UNITED	AVERAGE ANNUAL RUNOFF ITA ACRE	FEET		24.5 33.7 7.9 3.7 9.684,713 7.9 9.684,713 7.9 9.684,713 7.9 9.684,713 7.9 9.689,473 9.884,473 9.886,173 7.5 10.3 10	120.257 99.9911 <u>0</u> 112.200 112.200 940/54 mi 672/54 mi 728/54 mi 725/54 mi 725/54 mi 647/54 mi
NO JE	LENGTH OF RECORD	YEARS	BAR DAM)	7.1 7.1 7.1 7.1 7.1 7.1 7.1 7.1	6.25 8.35 8.25 8.25 8.25 8.3 20 3.3 20 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.
Z	DATE OF SURVEY		SABOVE HALES		Feb 1945 Nar 1945 Seo 1937 Seo 1937 Seo 1937 Nov 1937 Nov 1939 Nov 1939 Nov 1949 Nov 1949 Nov 1949
MADE	SE AREA RE MILES	NET	RIVER BASIN	68 3, 38 2/ 83 3, 38 2/ 83 1, 182 2/ 83 1, 182 2/ 50 1, 556 2/ 30 2, 92 3, 93 6/ 1, 142 6/ 1, 143 6/ 1, 144 6/ 1	195 10.57 10.57 10.57 10.67 10.67 10.05 10
SURVETS	DRAINAGE IN SQUARE	TCTAL	TERNESSEE R	703 3,468 3,468 1,183 1,183 4,541 9,550 9,550 3,67 1,571 1,573 1,508	199 121 2.16 10.75 9.2 28.2 28.2 28.2 28.2 28.2 0.03 0.03 0.03 0.17 4.47 4.47 4.47 0.17 4.47 0.17 4.47 0.17 8.57 8.57 8.57 8.57 8.57 8.57 8.57 8.5
EDIMENTATION .	NEAREST TOWN			Hanoton Tenn Hanoton Tenn Greenville Ten Conserville Tenn Conserville Ga Murohv, W. C Rainerville Ga Murohv, W. C Conserville Tenn C	Saenevarille, Ohio. Saenevarille, Ohio. Johnstown Pa. Johnstown Pa. Johnstown Pa. Hit Pleasant, Pa. Har Hersoort, Ohio. Harietta, Ohio.
RESERVOIR SE	STREAM			So. Fk. Hoiston R. Matauga R. Matauga R. R. Hoiston R. R. Fr. Maradala R. R. Fr. Tornessee R. Little Tennessee R. Little Tenne	Sanca Fork Sanca Fork Slack Fork Hinckston Run Useabonin Cr Salt Lick Fin Jacobs Cr No Fr Licking R Fr Bo of Ouck Tr
	RESERVOIR			South Holston Matauga Noteckee	Pleasant Hill Charles Hill Charles Hill Hinckston Run Hinckston Run Salt Lick Briderort (Inper) Tabor (Inper)
	DATA SHEET			20-1 20-2 20-6 20-6 20-7 20-9 20-10 20-11 20-11 20-14 20-15 20-16 20-17 20-18 20-19 20-10 20 20-10 20	21-1 21-2 21-2 21-4 21-4 21-1 21-1 21-1

244 200 200 55 55 378 395
33.35.0
462 444 819 348 150 101.3 745
6.328 0.204 0.3762 0.160 0.0465 0.342
1.25 16/ 0.076 0.076 0.073 0.022 0.019 0.059 0.039 20/
655 655 655
26 268 17/ 328 17/ 219 17/ 324 17/ 569 19/ 710
987/sq mi "606.000 333.200 442.300 290.000 1.509.800 621.000 51.150
6.0 6.0 7.33
Jul 1941 Sep 1949 Oct 1948 Aug 1948 Sen 1945 Feb 1945 Oct 1949
2.93 474 286 335 275 1.178 428 66.2
2.95 478 291 339 278 1.183 434 70
Zanesville, Obio Tionesta, Pa Sayton, Pa Sayton, Pa Ford City, Pa Confluence, W. Va Confluence, Pa Sherrodsville, Obio.
No. Br. Blount Sun Jionosta Cr. Lovalhama Cr. Vahoeling Cr. Crocked Cr. Tyaart R. Youthloghenv R.
21-20 Zanevville Mursery L. No. Br. Blount Run. 21-21 Loyalhama Greek. Loyalhama Cr. 21-22 Haboning Greek. vehoding Gr. 21-23 Haboning Greek. Crooked Gr. 21-24 Grooken Greek. Grooked Gr. 21-25 Youark River. I yeart R. R. R. S. Stouchloohenv R. Youdhloohenv R. Indian Fk.
22-1-2

	#,600 ·
	3,162
	2.64
	0.19
	- 22
	1.103 22/
IVER BASIN	503/sq mi *
AUNFE R	96
GREAT LAKES DRAINAGE (IN MICHIGAM) AND MAUMFE RIVER BASIN	Aug 1940
NAGE (19 MI)	93
T LAKES DRAI	118
GREA	0hio
	Celina, O
	St. Marys & Wabash R.
	Grand 21/
	22-1

GREAT LAKES ORAINAGE (IN MICHIGAN & WISCONSIN)

Trib. of Honey Cr. Carlinville, 11. 0.53 0.51 Jul 1949 10.4 109 41.5 0.34 1.40
Trib. of Homey Cr. Carlinylle,
Trib. of Honey Cr. Carlinville, III. 0.53 0.51 Jul 1949 27 109 100
Trib. of Honey Cr. Carlinville, 111 0.53 0.51 Jul 1949 17.
Trib. of Honey Cr Carlinville, III. Honey Cr Carlinville, III. Sandamon R Carlinville, III. Trib. of Cahokia Cr Edwardsville, III. Surda E. Clarck Creeks. Springfeld, III. Surda Cr Wacombe, III. Brush Cr Cares Macombe, III. Frib. of Panther Cr Pittsfield, III. Trib. of Panther Cr Winfield, Mo 142.
Trib. of Honey Cr Carlinville, III. Honey Cr Carlinville, III. Sandamon R Carlinville, III. Trib. of Cahokia Cr Edwardsville, III. Surda E. Clarck Creeks. Springfeld, III. Surda Cr Wacombe, III. Brush Cr Cares Macombe, III. Frib. of Panther Cr Pittsfield, III. Trib. of Panther Cr Winfield, Mo 142.
Trib. of Honey Cr Carlinville, III. Honey Cr Carlinville, III. Sandamon R Carlinville, III. Trib. of Cahokia Cr Edwardsville, III. Surda E. Clarck Creeks. Springfeld, III. Surda Cr Wacombe, III. Brush Cr Cares Macombe, III. Frib. of Panther Cr Pittsfield, III. Trib. of Panther Cr Winfield, Mo 142.
Trib. of Honey Cr Carlinville, III. Honey Cr Carlinville, III. Sandamon R Carlinville, III. Trib. of Cahokia Cr Edwardsville, III. Surda E. Clarck Creeks. Springfeld, III. Surda Cr Wacombe, III. Brush Cr Cares Macombe, III. Frib. of Panther Cr Pittsfield, III. Trib. of Panther Cr Winfield, Mo 142.
Trib. of Honey Cr Carlinville, III. Honey Cr Carlinville, III. Sandamon R Carlinville, III. Trib. of Cahokia Cr Edwardsville, III. Surda E. Clarck Creeks. Springfeld, III. Surda Cr Wacombe, III. Brush Cr Cares Macombe, III. Frib. of Panther Cr Pittsfield, III. Trib. of Panther Cr Winfield, Mo 142.
Arctic Pond. Lake Bloomington. Lake Bloomington. Lake Carlinville. Lake Oscatur. Sandamon R. Carlinville, III. Carlinville, III. Carlinville, III. Carlinville, III. Sandamon R. Carlinville, III. Carlinville, II
Arctic Pond. Lake Blowmington. Lake Brownington. Lake Carlinville. Honey Cr. Lake Decatur. Sandamon R. Sharfer Pond. Trib. of Cahokia Cr. Lake Saringfield. Spring Cr. Lake Bracken. Pittsfield. Pittsfield. Navigation Pool #25 (Winfield Oam).
Arctic Pond Lake BloomIngton Lake Carlinville Lake Ocatu Shaefer Pond Lake Spring Lake Spring Lake Lake Gracken Lake Gracken Lake Gracken Lake Gracken Lake Gracken Lake Gracken (Hinfield Oca)

1.270 1.020 248 2480 2.890 660 911 2.152 3.090

0.532 0.934 0.22 0.237 2.65 0.705 0.701 1.97

Capacity is at top of 5-foot flashboards. Prior to 1925 dam was 35 feet lower. Based on capacity at base of flood control bool (top of multiple use). Includes area above Watsuga Reservoir which closed Dec. 1, 1948. Ossed on original volume as of 1925 computed from probing obtained Feb. 1938.

dam.

Some dredging since 1934.

At present soilbay elevation (lowered 0.8 foot in 1908). From 1836 to 1936 (JW ratio was 449. From 1835 to 1836, spillway elevation was lower.

At present spillway elevation (lowered 0.8 foot in 1908). From 1836 to 1936 (JW ratio was 449. From 1835 spillway elevation was lower.

At present spillway elevation (lowered 0.8 foot in 1908). From 1836 to 1936 (JW ratio was neather 1846 and may natural lake. Lake originally used as federed for Obio canal system.

East Granch Res. and many natural lakes act as sefficient sediment traps.

Our failed earlier in 1938, but little sediment lakes cover the reach of the total storage loss of 4.39 arre feet.

For food control bool. The sediment rannes cover the reach of the conservation bool. No deposits were observed above the limit of the low-water requisition bool.

Range lines have not been established in the ubstream 40 percent of the reservoir. In the survey, no decosits were observed above the limit of the low-water requisition pool. Opposits in remaining portion were so small that they were hardly measurable. ¥191912|806|

Conservation bool was raised uf ft. in June 1947. Reservoir was empty Nov and Dec 1946 following drawdown in Oct. Some sediment may have been washed out of reservoir during drawdown, as channel below dam was filled with sediment. Sediment was predominately a fine still with some coarse, silt and sand. Original wet color was dark with a purple tinge, which changed to tan when dry. Oralis into both Mabash River and lake Erie. Originally built as a canal freder lake. Also known as Lake St. Marvs.

At oresert soll was a lake Fire. Originally be the square mile of was 1870.

Turbidity records indicate that an average of 75 tons annually per square mile of drainage area have bassed over spillway. Total annual sediment load per square mile, 1922-46 was 341 tons. Trap eff, 784, At top of 13 ft. flashbards added in 1946. 20/

At present spillway elevation. Spillway raised 1.24 ft, in 1944.

Indeterminate. Estimated.

23-

SUMMARY OF RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

SEDIMENT	CONCEN-	TRATION	IN PPM	PY WT	
ANNUAL	MENT	ACCUMULATION PER TRATION	SQUARE MILE IN PPM		AC FT TONS
AVERAGE	SED	ACCUMUL/	SQUA		AC FT
AVERAGE	ANNUAL	STORAGE	LOSS IN	PERCENT	
H AVERAGE INITIAL SPECIFIC AVERAGE AVERAGE ANNUAL SE	WEI CHT IN	LBS (DRY)	PER	FT	· · }
INITIAL	CAPACITY-	WATERSHED	RATIO	FEFT IN AC FT CH FT	PER SC MI
AVERAGE	ANNUAL	RUNOFF	IN ACRE	FFFT	
LENGTH	OF	RECOR	<u>z</u>	YFARSS	
	DATE	0 F	SURVEY		
	DRAINAGE AREA	E MILES			NET
	URAINAG	IN SQUARE MILES			TOTAL
		NEAREST TOWN			
-		STREAM			
		RESERVOIR			
	DATA	SHEFT	NUMBER		

UPPER MISSISSIPPI RIVER BASIH (FAIRMONT TO LOHISIANA) Iowa, Shunk and Des Moines River Basins

1		!	*00 h h	1	!		ļ	}	5,900*		!		1	i	1.000	3,100*	3.800*	2.800*	-	
	1	!	1,490*	1,190	1.280	1,580	7.740	5.420	066.1		096"		09#.#	5.280	340	726	1.530	695	}	!
;		:	±.	0.977	1.05	1.45	4.18	2.93	1.52		90.1	: .	2.41	2.85	0.24	924.0	1.40	0.638	;	;
1.52	61.1	90.1	2.38	2.99	3.20	1.03	8.75	6.13	3,15		2.57		5.68	6.07	0.66	2.79	1.57	0.73	0.53	0.18
;	:	1	.09	;	26	50*	85*	85*	*09		85*		82.	*5*	65*	*02	£0.	*05	!	1
;	:	;	47.5	32.4 3	22.4 2/	138	46.2	46.2	48.1		39		0 †	42.4	36.3	6.9	9.73	88.1	;	
42,600,000	39,400,000	41.400,000	342/sq mi*	:	1	1	}	1	312/sq mi*		1	:	#19/sd mi	587/sg mi*	334/sq mi*	294/sq mi*	336/so mi*	217/sq mi*	37,963,000	51,010,000
15	22	33	13.3	6.1	22.9	23.4	es	2	œ		15		m	co	· =	2	6	0_	11.7	13.1
Jiin 1928			Sen 1947			Aug 1949	Dec 1939	1941	1932		1936		72.7 3 Dec 1939	Dec 1929	9461	8161	1934	9461	Nov 1949	
7	⊐	⊐	13.8	13.0	13.0	2.88	50.2	50.2	15.24		72.7 3		72.7 3	59.63	31.6	2.52	2.92	2.1	7	٦
119,000	000.611	119,000	13.9	13.1	13.1	2.94	52.0	52.0	15,34		77.0		77.0	0.99	31.8	2,54	2.98	2.1	39.400	134.300
Keokuk, lowa		pg	Eldora, lowa	Galva, 131		Carthane, Ill	Kinderhook, 111	00	Eldora, lowa		New Canton, 111		New Canton, Ill	New Canton, III.	Rampton, lowa	Wadrid, lowa	Fairfield, lowa	Guthrie Center, Iowa	Muscatine, lowa	Canton, Mo
ool #19 (L. Cooper, (enkuk Oam) Mississippi R		00	Pine Or	Fitch Or		Long Gr	Desilting Basin McCraney Cr	00	Pine Cr		Hadley Cr		Nadley Cr	Sasin Kieer Orsilling.	Unnamed Stream	Trib. of 8ig Cr.	Crow Cr.	Soring Brook	Mississippi R	Mississiooi R
25-1 Pool #19 (L. Cooper, Kenkuk Oam)			Upper Pine Pine Cr	Lake Calhoun Fitch Cr		Carthage Res Long Cr	Desilting Basin		Pine Lake Pine Cr	Nadley Creek Old	Desilting Basin	Nadley Creek New	Vicor Crock Deciling	Sasin.	Beeds Jake	C M St P & P RR Res 4/ Trib. of 8ig Cr.	Fairfield No. 3	Soringbrook Soring Brook	Pool #16	25-15 Pool #20 Mississiooi R
25-1			25-2	25-3		25-4 25-5			25-6			25-8	95.0	6-67	25-10	25-11	25-12	25-13	25-14	25-15

AINAGE	
08	
) & LAKE MICNIGAM DRAINAGE	
N W W	
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I RIVER BASIN (PRAIRIE DU CNIEN TO ROCK ISLAMD)	
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	0.50	0.28	0.04	0,31	0.24	6h. I	1.52		2.21	0.82	.429 1.07 6/
	;	;	.1	;	1	1	75.1		*02	72.5	*06
	;	;	;	;	1	5.24	5.24		11.4	12.1	
	27.200.000	32,000,000	32,800,000	32,900,000	32,256,000	;	;	E DU CNIEN) r Basins	623/sq mi*	550/sq mi*	15.250
0000	4.5	10.7	12.8	14.7	16.7	7.6	9.41	0 PRAIRI oix Rive	15	72	9.6
NOCK AND WASSIDINICON NIVER DASHIES	Aug 1938	Nov 1944	0ec 1946	Nov 1948	Nov 1950	Feb 1942	Feb 1949	(ST. PAUL T	Oct 1941 Jun 1939	Jun 1939	1923 Feb 1945
and manager	7		ì	7	7	911	911	RIVER BASIN t, Chiooewa	50.7	138-2	600 5/
100	88,500		88.500	88,500	88,500	911	911	IPPER MISSISSIPPI RIVER BASIN (ST. PAUL TO PRAIRIE DU CNIEN) Wisconsin, Root, Chiorewa, and St. Croix River Basins	60 50.75	138.6	8,900 59,100
	Rock Island, ILL - Ia	00	00	p0	pg	Strawberry Pt. lowa.	po	4 93 ddil			Prairie du Sac, Wis. Winona, MinnWisc
	Mississipoi R		00	00	03	(Forestville Lake) Maquoketa R Strawberry Pt. lowa.	00		Elk Cr	Beaver Cr	Wisconsin R
	26-1 Pool #15 Mississipoi R Rock Island. ILL - la	po.	00	po	Backbone Lake	(Forestville Lake)			Elk Creek Lake Elk CrEttrick Mill Pond N. Br. Beaver Cr	Marinuka (Oavis Lake).	Prairie Du Sac Misconsin R
	26-1				26-2				27-1 27-2	27-3	27-4

	1		864 9.980 9.910	34.240		7.860	1	2.900		1
	25.6		598 4.200 3.990 703	3,386	3,568 3,685 3,874 511	2.421 2.810 2.614 2.510 15.250 1.170 2.760	1	98.6 138 735		93t
	0.038		0.464 3.87 2.93 0.538	8.58	2.73 2.82 2.86 0.477	1.84 2.24 2.00 2.41 9.66 0.894 2.12	0.438	0.681 0.127 0.582		99.0
	hh*0		0.308 4.43 5.21 0.65	8.52	0.26	1.55 1.02 1.02 12.1 0.84 5.5	68.0	4.06 0.22 0.30		68.1
	30.94		59.2 49.9 62.5 60.	84.4	60* 60* 62.2 49.15	60.4 57.6 60 72.5 60"	1	66.5 50° 58°		.59
	8.64		149 57 30.3 82	98.3	863 183 227 68.2	116 116 146.2 46.2 66.2 103 411	48.9	1 57 57	те)	34.6
		£.	7,249.000 5.7 inches* 5.5 inches*	6.2 inches* 1,058	1111	3.3 .3.1	FS :	276.070 424.000	UPPER REPUBLICAH, MORTH PLATTE, RIVER RASINS (FT. LARAWIE TO HORTH PLATTE) ANO SOUTH PLATTE RIVER BASIH (SUBLETTE TO HORTH PLATTE)	i
SIH	2	er Basins	17.8 10.9 9.8	16.1	4 6.9 13.0 26.4	4.9 28 6.3 6.9 <u>8/</u> 25.5 13.6	II VER 8ASI	5.38	TO HORTH	9.6
HE HORTH 84	Oct 1950	BRASKA CITY	Oct 1948 May 1949 May 1949 Jun 1940	Jun 1937 Hov 1947	Aug 1939 Oct 1937 May 1937 Seo 1939	Jun Jul Oct Dec May Hov	REPUBLICAH P	Aug 1948 Hov 1950 Nov 1951	RASIHS (F)	May 1937
RED RIVER OF THE HORTH BASIH	438.5	MISSOURI RIVER BASIH (HEBRASKA CITY TO HERMAH) Osaoe, Gasconade, and Grand River Basins	13.900 0.163 1.04 41.5	3.56	1.79 7 0.17 7.76 5.28	6.11 2.07 2.07 0.064 0.505 4.82 2.62	SMOKY HILL AHO LOWER REPUBLICAH RIVER BASIHS 20.47 20.26 Aor 1937 8.0	463 2.308 9/ 2.308 9/	LATTE, RIVER E RIVER BASI	14.89
RE	439	MISSOURI RIV Osaoe, G	000.166 0.166 1.05 41.9	1.62	2.19 0.18 8.15 5.35	6.2 6.2 2.17 0.065 0.509 4.98 4.98	SMOKY HILL 20.47	493 7.860 7.860	ICAH, MORTH P SOUTH PLATT	15
	Bronson, Minn		Eldon, Mo Stanton, lowa Westboro, Mo Sprinqfield, Mo	Slair, Kans Tonganoxle, Kans	Reading, Kans Ottawa, Kans Horton, Kans	Olathe, Kans. Brithond, Kans. Tarkio, Heb. Tarkio, Heb. Allerton, lowa. Centerville, lowa.	Bennington, Kans	Vuinter, Kans Kanobolis, Kans	UPPER REPUBL	Wellfleet, Meb
	Two Rivers		Osaoe R	Chase Cr	Osage River Basin Mission Cr	Cegar C. Unnamed Trib. Trib of Maddy Gr. Trib of Tarkio Gr. So., Chariton R. Hanson's Branch.	Sand Gr	Saline RSmoky Hill R		Medicine Cr
	Lake Bronson		(8aonell Oan) carl Chinquist L. H. Fuelling	Ossilting Basin Leavenworth County State Lake	Lyon County State Lake (Readino Lake) Martin Farm Lake Mission Lake	Lake Olathe Richmond Lambe Farm Pond E. W. Howell Allerton Centerville #2.	Ottama County State L.	Sher dan County State Lake Kanopolis		Wellfleet
	30-1		31-2	31-6	31-8	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	32-1	32-2		33-1

Indeterminate
Solibay raised 2.89 ft. In 1996. Original c/w ratio was 21.8. All sedimentations and storade loss data based on the higher soillway elevation. Excludes Hissission River Bottom land.
Reservoir no Index visible on 1939 aerial photos.
Flow from 8.300 sq mi of drainace area oasses through power dams which act as traos.
Flow from 8.300 sq mi of drainace area oasses through power dams which act as traos.
Reservoir no 8.300 sq mi of drainace area oasses through power dams which act as traos.
Reservoir silted full one 1936, crest raised dune 1937, silted full again Dec. 1940, crest raised again May 1945, silted full again May 1949.
Estinated or assumed. **」29岁300万岁3.**

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

S	RY WT			877 877 0 277.6		13, 390 29, 180 11, 590 11, 590 11, 970 11, 970 11, 970 11, 970 11, 960 11, 97	11	1
FRAGE ANNUAL SEDIMENT UMULATION PER SQUARE MILE	TONS		167 175 495 	259		7, 670 5, 390 6, 870 97, 700 97, 700 9	153	1
AVERAGE ANNUAL SEDIMENT ACCUMULATION PER SQUARE MILE	AC FT		0.099 0.106 0.301 0.258 0.253	0.239 0.229 0.226 0.224 0.0244		6.41 9.51 9.51 9.51 9.51 9.51 9.51 9.53 9.35 9.35 9.35 9.35 9.35 9.45 9.46	0.17	0.822
AVERAGE ANNUAL STORAGE	PERCENT		00.43 0.42 1.19	0.025		5, 48 4, 3, 48 6, 29 1, 03 1, 03 1, 03 1, 03 1, 03 1, 04 1, 04	0.54 1.03	0.97
SPECIFIC WEIGHT IN LBS (DRY)	CU FT		77.3 75.6 	53.2 70 *		54.2 55.2 55.2 55.2 56.3	41.3	1
INITIAL CAPACITY- WATERSHED RATIO	IN AC FT PER 30 MI	SUBLETTE)	22.9 25.3 25.3 13.42 13.42	13.42 13.42 13.42 13.42 13.42	TH PLATTE)		32.1	82.3
AVERAGE ANNUAL RUNOFF IN ACRE		BASIN (ABOVE S	1, 499, 514 1, 361, 192 1, 316, 774	1,236,704 1,236,319 1,194,195 1,180,148 1,175,657 140,799	RIVER BASIN (8F10W HORTH	7.8 inches 6.7 inches 6.1 inches 6.1 inches 6.3 inches 6.3 inches 6.3 inches 6.3 inches 6.1 inches 6.3 inches 6.3 inches 7.7 inches 7.9 inches 7.9 inches 8.4 inches 8.4 inches 6.6 inches 6.6 inches 6.6 inches 6.6 inches 6.6 inches 6.6 inches 6.1 inches		1
LENGTH OF RECORD	YEARS		43 2.25 3.25 3.83 7.63	11.93 11.93 16.93 20.43 31		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	28 26	6.0
DATE OF SURVEY		SOUTH PLATTE RIVER	Aug 1933 Jun 1938 Jun 1939 Jan 1931 Jan 1933 Jan 1935		CITY) PLATTE	Apr 1949 4.6 Apr 1949 9.0 Apr 1949 10.1 Apr 1949 10.1 Apr 1949 10.1 Apr 1949 8.8 May 1949 8.8 Apr 1949 4.6 Apr 1949 10.7 Apr 1949 11.75 Apr 1949 11.75 Apr 1949 1.75 Apr 1949 7.8 Apr 1949 7.8 Apr 1949 7.8 Apr 1949 7.8 Apr 1949 7.5 Apr 1949 7.5 Apr 1949 7.5 Apr 1949 7.5 Apr 1949 10.9 Apr 1948 32.9	Jun 1937 Jun 1937	Jul 1945
DRAINAGE AREA IN SQUARE MILES	NET	BASIN (ABOVE FI. LARAMIE)	166.9 386 386 5,400 5,400 5,400	20,400 20,400 20,400 1,400	TO NEBRASKA	0.0157 0.0157 0.0130 0.0120 0.	0.57	0.197
DRAINAGE IN SQUARE	TOTAL	BASIN (ABOVE	167.2 387 16,200 16,200 16,200	16,200 16,200 16,200 16,200 1,766	(ABDVF BLAIR	0. 159 0. 109 0. 109 0. 109 0. 109 0. 109 0. 089 0.	0.58	0.203
NEAREST TOWN		NORTH PLATTE RIVER	Denver, Colo Denver, Colo Guernsey, Kyo	000 000 000 000 000 000 000 000	MISSOURI RIVER BASIN	Ricketts, lowa. Logan, lowa. Logan, lowa. Lenison, lowa. Denison, lowa. Denison, lowa. Denison, lowa. Stemett, lowa. Stemett, lowa. Denison, lowa. Denison, lowa. Denison, lowa. Denison, lowa. Denison, lowa. Aspinwall, lowa. Denison, lowa. Macedonia, lowa. Macedonia, lowa. Macedonia, lowa. Recison, lowa. Recison, lowa. Ericson, Neb. Brithen, Minn. Washta, lowa. Bronson, lowa.	Hayes, So. Dak	Pierre, So. Oak
STREAM			Cherry Cr Cherry Cr Morth Platte R	00 00 00 00 South Platte R.		ib of Soldier R ib of Hillow R ib of Goyer R ib of Goyer R ib of Boyer R ib of Hishabotha ib of Word R ib of Boyer R ib of Soyer R	8r of Frozenman Cr	Trib of 8ad R
RESERVOIR			Castlewood. Kenwood. Guernsey. D0.	00.00.00.00.00.00.00.00.00.00.00.00.00.		Fred Brown Fred Brown 4 A. Evers Lower Re G. 4 A. Evers Lower Re C. 7 Gadd Otto Golar Thomas Boldrin Homas Boldrin Jones Crek Emma La Frontz Emma La Frontz Herman Lage Herman Lage Herman Lage Herman Lage Herman Lage Herman Lage Reman Hage Herman Lage Farson Farr Max Miller #5. Barrey Mundt Tracy North Lake Ericson C. A. Stiles Farmers' Ditch Did Desilting Basin.	Elkins Stock Pond No 1	Land Utilization Project No. 226-1
DATA SHEET NUMBER			34-2 34-3	34-4		35-5 3 35-5 3 35-7 4	37-1	

							1,187.5		1
		202 93.4					1,478		i
0,458 0,559 0,529 0,521 0,709 0,443 0,474 0,202 0,474 0,202 0,474 0,202 0,474		0.08					1.74		0.353
2.29 2.29 2.29 2.28 2.28 1.12 1.70 1.70 1.70 1.70 1.70 1.70 1.70 1.70		1.17					1.15 0.45		0.11
		53.6					39		;
34.2 1.84.2 1.84.2 1.84.2 1.84.3 1.84.3 1.84.2 1.84.3 1.84		13.4					145		310.09
15		11	8 as ins				310,176		979,515
99.3 99.3 99.3 99.3 98.3 77.7 77.7 77.7 77.7	E PIERRE) asins	25.0	IBR I OGE) our i River	LISTON)	(AH)		29.1 9.42		31
1945 19	10GE TO A80V rche River 8	Jun 1937 Jun 1937	LISTON TO MO Little Miss	RTMAN TO WIL River Basins	MISSOURI RIVER BASIN (ABOVE ZORTWAN)	LOWER YELLOWSTONE RIVER BASIN Tongue & Powder River Basins	May 1937 Oct 1948	UPPER YELLOWSTONE RIVER BASIN	1161
0.981 0.748 0.163 0.163 0.151 0.234 0.234 0.472 0.472 0.472 0.472 0.472 0.106 0.116 0.513 0.533	BASIN (MOBR d Belle Fou	0.188	8ASIN (WIL Heart, and	R BASIN (ZO	IVER BASIN	ELLOWSTONE	1,734	ELLOWSTONE	094,1
0, 995 0, 742 2, 555 2, 555 2, 555 0, 166 0, 147 0, 508 0, 108 0, 108 0, 138 0, 533 0, 339	MISSOURI RIVER BASIN (HOBRIOGE TO ABOVE PIERRE) Cheyenne and Belle Fourche River Basins	0.609	MISSOURI RIVER BASIN (WILLISTON TO HOBRIOGE) Horeau, Grand, Cannonbail, Heart, and Little Missouri River Basins	HISSOURI RIVER BASIM (ZORTMAM TO WILLISTON) Milk & Musselshell River Basins	MISSOURI R	LOWER 1 Tongue	5.20 1,740	UPPER	1,470
Pierre, So. 0ak	Σ	Gettysburg, So. Oak. Gettysburg, So. Oak.	Horeau, Gran				Baker, Mont		Cody, Wyo
226-2 Trib of Missouri R. 226-4 Trib of Missouri R. 226-1 Trib of Missouri R. 226-21 Trib of Bad R. 226-22 Trib of Missouri R. 226-22 Trib of Missouri R. 226-32 Trib of Missouri R. 226-33 Trib of Missouri R. 226-34 Trib of Missouri R. 226-35 Trib of Missouri R. 233-2 Trib of Missouri R. 233-1 Trib of Missouri R.		Trib of L. Cheyenne R Little Cheyenne Cr					Sandstone Cr Tongue R		Shoshone R
Land U. Proj No.		Johnson's Stock Pond Bartel Stock Pond					BakerTongue River		8uffalo Bill
37-4 37-5 37-5 37-6 37-9 37-10 37-11 37-12 37-14 37-14 37-16 37-16		38-1 38-2	39	0+	3		42-1 42-2		43-1

Estimated or assumed.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

	7											
SEDIMENT CONCEN- TRATION IN PPM BY WT					1111			111			3,390	1111111
AVERAGE ANNUAL SED MENT ACCUMULATION PER SQUARE MILE AC FT TOWS		111111111		1111			+50 +50 52.3	967	111		136 620 2,522 4,055	600 7,296 569 3,162 1,416 701 612
AVERAGE ANNUA SEDIMENT ACCUMULATION F SQUARE MILE AC FT TONS		2.63 0.28 0.455 0.31 0.66 0.196		0.278 0.23 0.949 0.877	3.37 1.43 0.532 3.23	0.29 3.05 0.21 5.22	0.85 0.47 0.43	0.74	0.35 0.18 0.46		0.108 0.586 1.93 2.68	0.459 3.40 0.45 2.42 1.0 0.495 0.426
AVERAGE ANNUAL STORAGE LOSS IN PERCENT		2.20 0.23 0.40 0.14 1.59 1.59		0.09 6.10 0.74 0.69	1.36 0.22 0.20 0.25	0.11 0.56 0.74 0.44	0.60 0.3 0.91 0.79	0.35 0.98 0.34	0.34		0.17 0.601 0.59 5.00	0.92 1.71 0.98 1.03 8.29 0.82
SPECIFIC WEIGHT IN LBS (DRY) PER CU FT		11111199		1111	1111	1111	1.84	*09 51.17	111		57.8 48.6 60 69.47	60* 98.52 58.1 60* 65* 65*
INITIAL CAPACITY- WATERSHED RATIO IN AC FT PER SÇ MI		119 111 212 41 41 494 864		310 222 125 125	236 599 258 1,170	252 511 29 1,100	142 160 46 4.71	201 75 79.2	28.1 +0.1		62 96 308 52.8	49.5 1.93 45.9 230 12.1 67.4 91.5
AVERAGE ANNUAL RUNOFF : IN ACRE	Ω	822,000 1,590,000	ins		1111					Basins	61,480	
LENGTH OF RECORD IN YEARS	LITTLE ROC	0.4 6.75 6.75 4.2 2.7 22.4 7.9 6.9	AN BUREN) River Bas	10.1 9.75 22.5 33.5	5.9 22 22 12.3	8.8 18.8	10.75 4.7 42 34.4	12.1	യ വയ	TO TULSA) Fork River	6.4 8.5 10.25 11.2	8.8 1.2 8.6 14.5 2.5 9.0
DATE OF SURVEY	IN BUREN TO	Nov 1935 Nov 1946 Nov 1946 Apr 1940 May 1940 Aug 1935 Apr 1950 May 1950	(TULSA TO V	Aug 1947 Jun 1940 Dec 1935 Dec 1946	2000	8275	2 2 6 6	Aug 1939 Oct 1939 Jul 1935	1939 1939 1939	GARDEN CITY on, and Salt	Jun 1949 Dec 1949 Jun 1935 Oct 1940	Apr 1537 Oct 1940 Nay 1937 May 1935 Sep 1940 Sep 1940 Apr 1937
AREA MILES NET	ARKANSAS RIVER BASIA (VAM BUREN TO LITTLE ROCK) WHITE RIVER dASIN	4.11 4.11 2.57 64 15 4,606 652 1,772	ARKANSAS RIVER BASIN (TULSA TO VAN BUREN) Grand, Verdigris and Lower Canadian River Basins	3.92 Ar 2.30 Jul 8.57 Dr 8.57 Dr					0.27 1.20 3.04	NVER BASIN (1,726 3,156 8.67 1.40	17.84 1.84 37.55 12.95 0.31 0.21 34.3
DRAINAGE AREA IN SQUARE MILES TOTAL NET	ARKAHSAS RIN	4.16 4.16 2.60 65 15.2 4,610 1,806	ARKANSAS Grand, Verdi	4.06 2.35 8.72 8.72	20.9 30.7 40.1 21.0	2.3 4.58 19.8 8.95	2.43 81.25 2.41 2,210.0	3.38 56.44 56.44	0.28 1.21 3.07	ARKANSAS RIVER BASIN (GARDEN CITY Middle Canadian. Lower Cimarron, and Salt	1,735 3,200 9.13 1.42	18 1.89 37.93 13.30 0.31 0.22
NEAREST TOWN		Conway, Ark 100 Ark Gooneville, Ark Hounta inburg, Ark Horrillon, Ark Branson, Ho Nimrod, Ark Norfork, Ark		Fayetteville, Ark Fayetteville, Ark Sapulpa, Okla	McAlester, Okla McAlester, Okla Okmulgee, Okla Shawnee, Okla	Taft, Okla Arcadia, Okla Wilburton, Cr	Sapulpa, Okla Muskogee, Okla Iola, Kans Baxter Springs, Kans	Parsons, Kans Claremore, Okla Spavinaw, Okla	Cheisea, Okia Claremore, Okia Pryor, Okia	Mido	Supply, Oklastillwater, Okla	Medicine Lodge, Kan. Augusta, Kans. Guthrie, Okla 8 ackwell, Okla 8 ackwell, Okla
STREAM		East Fork Cr. 00. Trib of Perti Jean Cr. Jack & Jones Creeks. Ceedar Cr. Mhite River. Fourche La Fave R. North Fork R.			Peaceable Cr 8ull Cr Salt Cr So. 8r. Geer Cr	Br of Pecan Cr Trib of Oeep Fork Cr. Fourche Maline Cr Beemore Cr	Pretty Water Cr 8ig Greenleaf Cr Sprg. R. & Shoal Cr	Trib of Neosho R Dog Cr			Wolf Cr	Stump Arroya Medicine Lodge R Indianola Cr. Trib of Cottonwood R. Bois d'Arc Cr. Bois d'Arc Cr.
RESERVOIR		Lake Bennett. Lake Booneville Fort Smith. Lefte Bailey. Lake Tancycomo. Nimrod.		Lake Wedington	Brown Lake Lake McAlester Lake Okmulgee		Pretty water Lake Greenleaf Lake Kirk Lake		Kennamer Lake State Fish Hatchery L. Lake Scarbow		Great Salt Plains Boomer Lake Benington's Lake	
DATE SHEET NUMBER		### #### #############################		45-1 45-2 45-3	#5-5 #5-6 #5-6	45-8 45-10 45-10	#5-12 #5-13 #5-15	45-17 45-18 45-19	45-20 45-21 45-22		46-2 46-2 46-4	_

ARKANSAS RIVER BASIN (LAMAR TO GARDEM CITY) Hober Cimarron and Upper Canadian River Basin

18, 863 13,079 12,498 15,671 15,671	12, 043 10, 186 12, 048 11, 048	111	7 090 t
255	750 742 742 452 452 452 1.117	111	2.234
0.144 0.677 0.6157 0.498	0.436 0.436 0.438 0.533 0.541 0.640 0.87	1.08 1.72 0.50	2.52 1.66 1.26 1.26 1.05 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
0.77	2.28 0.48 15.12 15.12 1.47	0.49 0.15 2.85	0.55 0.258 0.258 1.07 1.33 0.73 0.68
7.57. 7.57. 7.57. 7.57.	75.7 75.7 75.7 75.7 75.7 89.07 75.26 75.4	111	40.7 653.4 65.9 65.9
2222211111	37 37 37 37 10.2 10.9 50.8 63	214 968 17.4	193 191 191 197 25.5 16.9 187 187 187 187
1930 485 381 919 381 9	887, 471 773, 540 453, 186	111	
2	2.4 6.1 6.1 339.4 28.9 27	0 ECORE)	25 4487
Max 1940 Jun 1942 Next 1944 Feb 1949 1946 1946 1946	111 1942 0 11 1 1942 0 0 0 1944 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	150N TO GRAN ur River Bas Mar 1936 Mar 1941	Jun 1938 Jun 1938 Jun 1949 Jun 1949 Jun 1949 Jun 1948 Jun 1948
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	17,080 17,080 17,080 17,080 17,080 15,080 152.4 152.4 78.5 608	REO RIVER RASIM (OENISON TO GRAVO ECORE) Little and Sulohur River Basins 53.6 51.6 Mar 1936 13.1 1.46 1.26 Mar 1936 36 10.4 10.3 Jul 1941 10.3	KIVER BASIN LARGOE DERISOND 2.59 Jun 1938 15 2.50 Nov 1949 13 2.03 Jun 1949 9 0.63 Jun 1949 9 0.73 Jun 1949 9 0.73 Jun 1949 9 2.03 Jun 1949 9 2.1 Jun 1948 1 23.1 Nov 1950 12 23.1 Nov 1950 12 23.1 Nov 1950 12 23.1 Over 1948 6
7.350 6.950 May 1940 1.4 7.350 6.950 Jun 1942 3.4 436.495 7.350 6.950 Ort 1944 5.7 381.318 7.350 6.990 Fr 1949 5.7 381.318 7.350 6.990 Fr 1949 5.7 381.318 7.350 6.990 Fr 1949 5.7 381.318 7.350 7.350 7.350 Fr 1949 5.7 381.318 7.350 7.350 7.350 Fr 1949 5.34 Fr 1949 5	18.933 18.933 18.933 18.933 18.933 154.2 52.01 608	REO RIVE Litt	RED K 4.15 2.66 1.81 0.88 2.04 2.36 2.3.6 2.56 38.291
Hawkirk, P. May 100 100 100 100 100 100 100 1	Caddoa, Colo	Paris, Texas Paris, Texas Nashville, Ark	Ardmore, Obla Rvers, Obla Maill, Obla Lindsav, Obla Chevanne, Obla Chevanne, Obla Otheran, Obla Otheran, Tex Altis, Obla Denison, Tex
Canadian R. 00 00 00 00 00 (Off stream) (Off stream) (Off stream) (Off stream) (Off stream)	Arkansas R	Plne Cr Trlb of Pine Cr Mine Cr	Cado Cr. Innamed Stream 8 go Glasses Gr. Trib of Washita Kr. Trib of Broken Leg Gr.
Conchas. 00 00 00 00 00 00 00 00 00 00 00 00 00	John Martin .00 .00 .00 .00 .00 .00 .00 .0	Lake Grook	Ardmore Club Lake Carter Lake Carter Lake C. W. Lester Found No C. W. Lester Found No Santa Rosa Lake Lake Clinton Lake Clinton Lake Clinton Aftur
47-1 47-3 47-4 47-5 47-6 47-6		# 6 - 6 # 6 - 3 # 6 - 3	50-1 50-2 50-3 50-4 50-5 50-6 50-8 50-1 50-1 50-1

Suspended-load inflow was 609 acre-feet, suspended-load nutflow was 200 acre-feet during neriod. Sediment Inflow volume was computed to be 2,350 acre-feet, much of this probably settled out over a large area in deposits too thin to be measured accurately by echo sounders. Estimated or assumed. -17:

SUMMARY OF RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

- T								
SEDIMENT CONCEN- TRATION	FY WT			111111111				
AVERAGE ANNUAL SEDIMENT ACCUMULATION PER SQUARE MILE	TONS		3.211 8.308 8.308 1.782 1.058 2.831	3,835		63 619 720 720		1.62
	AC FT		2.49 2.57 2.39 1.13 3.55 3.55 3.53 1.67 0.782 0.782	2.21 2.93 0.785 1.44 1.63 5.51 0.46 0.72		0.083 0.066 0.465 0.441 0.21 0.07		0.88 0.334 0.034 0.04 0.054 0.054 0.054 0.054
AVERAGE ANNUAL STORAGE LOSS IN	PERCENT		0.98 0.66 0.71 0.72 0.26 0.39 0.39 0.36 1.33	1.68 0.10 0.10 0.18 0.61 0.52 0.26 3.95		2.57 2.03 0.098 0.098 0.042 0.042 0.043		00000000000000000000000000000000000000
SPECIFIC WEIGHT IN LBS (DRY)	CU FT		59.2 1.1 1.2 1.3 1.3 1.4 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	- *		24.9 35.6 1.1 1.1		H 1 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
INITIAL CAPACITY- WATERSHED RATIO	IN AC FT PER SQ MI		241 351 312 154 154 173 173 173 173 256 56 664 254	127 216 278 113 113 257 819 87 269	\$148	3.24 467 467 50 67 46 80	SASINS	199 655 955 955 955 955 190 190 190 190 190 190 190 190
AVERAGE AMMUAL RUMOFF IN ACRE	FEET		11111111111111		SAM ANTONIO, AND MIECES RIVER BASIMS	1.017.262	ORAGO RIVER E	000,006
LENGTH OF RECORD IN	YEARS	RIVER BASINS	28.25 69 69 10.5 28 64 64 64 13.25 8.5 12.8	7.8 23.6 10.8 10.8 46 13 20 20 16.5	O, AND HUE	7.6 23.9 35.2 35.2 37.2 38	E, ANO COL	17 20.3 20.3 32 32 32 51 51 51 52 52 7.7 53 83 80.5 17.75 20.75
DATE OF SURVEY		TRIBITY RIV	Dec 1949 Sen 1949 Sen 1949 Sen 1949 Sen 1946 Anr 1935 Anr 1935 Dec 1930 Anr 1938	Abr 1950 Abr 1938 Feb 1943 Mar 1939 Abr 1939 Abr 1939 Jul 1950 Abr 1939		Mar 1942 Jan 1937 May 1948 Feb 1941 Feb 1941 Feb 1941	IGTON) MIODL	An 1940 An 1940 An 1940 May 1949 May 1941 May 1941 May 1941 May 1941 May 1941
AREA MILES	NET	MECHES, AND	8.71 0.62 0.63 0.54 1.15 27.1 27.1 27.1 2.02 2.02 2.03 2.03 2.03 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.	0.29 1.75 1.033 809 4/ 1.01 1.01 2.50 3.05 3.05	O, GUADALIPE	16,791 16,791 578 578 578 19,313 0,07 0,19	END TO WASHIP	10.6 1.05 1.15 1.15 1.15 1.15 1.15 1.15 1.15
DPAINAGE AREA IN SQUARE MILES	TOTAL	SARINE,	9 . 20 1 . 174 9 . 20 9 . 20 1 . 174 2 . 1.2 2 . 1.2 2 . 1.2 2 . 1.2 4 . 1.3 1 . 1.4 1 . 1.4 2 . 1.2 1 . 1.4 1 . 1.	0.30 1.051 1.875 1.875 0.36 0.36 2.15 3.18	LOWER COLORAD	16.800 16.800 587 587 19.550 <u>5</u> / 0.07 0.20	ASIR (SOUTH 8	10.8 1.17 1.16 1.16 1.16 1.10 0.5 0.03 0.03 0.11 14.098 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
MEAREST TOWN			Corsicana, Tex. Corsicana, Tex. Corsicana, Tex. Corsicana, Tex. Corsicana, Tex. Dallas, Tex. Frand Saline, Tex. Frand Saline, Tex. Frand Saline, Tex. Frand Saline, Tex. Kentherford, Tex. Kenn, Tex.	Pedford, Tex. Wills Point, Tex. Bridgebort, Tex. Ft Worth, Tex. Ft Worth, Tex. Athens, Tex. Athens, Tex. Intsville, Tex. Frandall, Tex.	LOWER SRAZOS, LOWER COLOPADO, GUADALUPE,	Fathis, Tev. San Antonio, Tex. 100 Surnet, Tev. Llano, Tex. Llano, Tex.	SRAZOS RIVER BASIN (SOUTH BEND TO WASHINGTOW) MIODLE, AND COLORAGO RIVER BASINS	Santa, Anna, Tex. Santa, Anna, Tex. Comanche, Tex. Hobbard, Tev. Robers, Tev. Robers, Tev. Rubbard, Tev. Rubbard, Tev. Rubbard, Tev. Reridian, Tex. Reridian, Tex. Reridian, Tex. Reridian, Tex. San, Saba, Tex. Rubbard, Tex. Coleman, Tex. Santa Anna, Tex. Santa Anna, Tex. Santa Anna, Tex. Santa Anna, Tex. Reridian fox. Rubbard, Tex. Coleman, Tex. Rubbard, Tex. Rubba
STREAM			Fines Cr. Trib of En Cr. Firib of En Cr. Firib of En Cr. Firib of En Cr. Firib of En Cr. Yountain Cr. Simons Franch Tranch Cr. Nown Cr. Tranch Cr. Creat Cr. Cedar Cr.	Pados Cr. Pados Cr. Pados Cr. P. Ek. Trinity V. Innamed Trib of Sear Cr. Frid of Sear Cr. Seat Sandy Pr. Ek. Trinity V.		Munces R DD Medina		Trib of Jim Ped Cr. Nud Cr. Nercer Cr. Ferone Cr. Trib of E. Cottonud Cr. F. Cottonud
RESERVOIR			Terrell City Lake Lower Seaton Lake Rinke Need Lake Lake Halbert Lake Halbert Neanolia Lake Nountain Creek Grand Saline T 3 9 Zenn Glark Contain Chie	Ranco Lake Ranco Lake Wills orint Wills orint Prideort Esche Mondain Lake Frie Sabark City Lake Sabark City Lake Kelf freek Elkins Lake		Labe Cornus Christi Nedina Labe Cornus Choristi Notabanan Bo Poss Ranch Stock Pond Hoss Ranch Stock Pond		Lake Srarboroudh Lake Fanta anna Lake Lake Fants Lake Fants Lubbard City Lake \$2 Hubbard City Lake \$3 Hubbard City Lake \$3 Hubbard City Lake \$6 Hubbard City
DATA SHEET NUMBER			2 2 2 0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			52-1 52-2 52-3 52-4 52-4 52-5		50 50 50 50 50 50 50 50 50 50 50 50 50 5

	1 1	1	1	1	!	0 1 1 0 1	3,120	4.050	3,770	3,646	2,257		i	1	!	1
	1 1 1	1 1	1	!	1	265	091	699	999	1,012	752		274	2.49	:	1
0.056	0.16	6.24	0.10	0.63	0.07	0.135	0.380	0.475	969.0	0.754	064.0		0.21	0.044	- t. o	16.0
0.62 0.31	0.43	4.22	91.1	0.62	6.35	±1.0	6.39	64.0	2.93	3,35	2.49		0.19	1.26	0.32	94.0
::::	1	1	!	;	:	90	55	53	58.5	26.5°	58.5°		.09	67.5	;	ţ
144	37	9.6	9.8	96	0.7	96	96	96	73.6	23.6	23.6		105	5 th * 87	126	185
	1	1	1	1	1	207,030	175,620	156,090	267,300	321,900	407,200	BASIN	į	1	1	1
19.5 41	=	8.1	25	9.	5.3	2.1	7.6	1.91	6.4	6.6	17.7	DO RIVER BA	27	6.2	8.1	13.2
	Mar 1941											PPFA COLORA	Sep 1948			
73.4	0.35	0.80	0.13	10.1	9.00	1,532	1,532	1,532	1,662	1,662	1,662	BRAZOS AND UPPF: COLORADO RIVER	97.5	3,292	8.801	42.8
74.4	0.35	0.80	0.13	70°-	±0°.0	1,544	1,544	1,544	999'1	999'1	1.666	UPPER	98.5	3,294	07	# #
Mineral Wells, Tex Coleman, Tex	Brady, Tex	Brownwood, Tex	Lawn, lex	Lawn, lex	Ploneer, lex	Brownwood, Tex			Waco, Tex	pg	po		Abilene, Tex	San Angelo, Tex	Sweetwater, Tex	Abilene, Tex
Tri6 of Pecan Bayou	Trib of Brady Cr	Tri6 of Pecan Bayou	Irib of Jim Ned Cr	tith Lake Redbank Cr Lawn, lex	hilbeco Lake Paint Ur Ploneer, lex	Pecan Bayou		po	Bosque R	po	00		Elm Cr	S. Concho R	Bitter Cr	Cedar Cr
53-22 Lake Mineral Wells Rnck Cr	53-25 J. S. Wall Stock Pond.	53-26 White Tank	27 Zimmer Lee Stk. Pond (N)	53-28 Stith Lake		33-30 Lake Brownwood Pecan Bayou Brownwood, Tex	00	00	31 Lake Waco		·····00······		54-1 Lake Abilene Elm Cr Abi	2 Lake Nasworthy	3 Lake Sweetwater	4 Lake Kirby Cedar Cr Ab
53	53	53	53	23	53.	53			53-				-119	-49	-45	h-h9

RIO GRANDE BASIN (SELOW EAGLE PASS)

-99

RIO GRANDE BASIN (FORT QUITMAN TO EAGLE PASS) AND LOWER PECOS RIVER BASIN

RIO GRANDE BASIN (ESPANOLA TO FORT QUITMAN)

;	/11 11/	13,300 11/		:	20,350	1	15,120	174.3
	621	182		į	914.1	1	1,537	8.69
1.02	0.895	0.623		0.063	0.876	;	0.960	0.032
0.998	0.683	0.512		0.28	2.98	1	2.30	6.31
: :	-09	: :		;	;	;	73.5°	. 69
102	70 70	102		29.5	18.14	18.14	18.14	;
1,573,665	1,306,250	1,058,164		1	175,500	1	196,372	272,400
6.9	10.6	25.8 32.3	ASIN	6	3,25	6.33	6.83	36
	Aug 1925 Apr 1935		PECOS RIVER BASIN		Sep 1940			1961
25,666	25,866 25,866	25,866 25,866	UPPER	39.9	3,749	3,749	3,749	1,080
25,923	25,923 25,923 25,923	25,923 25,923		04	4,393	4,393	4,393	18,070
Hot Springs, N. Mex.		000		Capitan, New Mex			00	
Rio Grande	000			Sonito Cr, Kraut Gul.	Pecos R	po	0g	Pecos R
57-1 Elephant Butte Rio Grande	000			58-1 Sonito Sonito Cr., Kraut Gul.	Alamogordo Pecos R		00	58-3 Lake Avalon Pecos R
1-29				58-1	58-2			58-3

Excludes area above 2 lakes in watershed which contribute occasional flow to Lake Halbert.

Spillway crest was rised 2 ff. in 1839 to elev. 1032. Area cabacity, and cyl ratin are of 1032 elev.

Lake Clark was built in 1940 downstream from "Ento Lake." or "Club Lake," which was 6 will lakes in the system.

Data is based on confining defailmade area, surface area, s

フンツ シックシッシュラー,

Estimated or assumed.

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RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950 SUMMARY OF

							2 ~ +	0.4550
SEDIMENT CONCEN- TRATION IN PPM	RY WT		45,250 9,410 7,840				 1.55 1.72 1.24	7,774.45 8,590.45 7,132.04 5,545.12 5,776.47 5,405.95
AVERAGE ANNIVAL SEDIMENT SEDIMENT COPCEN- ACCUMULATION PER TRATION SQUARE MILE IN PPM	TONS		159.2 455 272 166.2 147				90 h	2,178.65 2,178.65 1,552.04 1,070.27 1,100.76
AVERAGE SEDI ACCUMULA SQUARE	AC FT		0.1218 0.1320 0.1667 0.1019 0.0900				0.432 0.456 0.371 0.266	1.75 0.819 1.429 1.018 0.702 0.722 0.664
AVFRAGE ANNUAL STORAGE LOSS IN	PFRCENT		1.769 1.85 2.34 1.426 1.247				0.34 0.43 0.35 0.25	10.6 0.309 0.540 0.285 0.266 0.273
SPECIFIC WEIGHT IN LPS (DRY) PER	CU FT		11112				20.	70* 70* 70* 70*
INITIAL CAPACITY- WATERSHED PATIO	PER SQ MI		00000000000000000000000000000000000000				127 98.25 98.25 98.25	16.6 264.27 264.27 264.27 264.27 264.27 264.27
AVERAGE ANNUAL RUNOFF IN ACRE	FEET		334,006 289,000 273,500				279,078 275,900 255,900 255,118	680,150 1,074,849 922,349 818,052 807,544 793,732
LENGTH OF RECORD	YEARS	(p,	10.42 16.84 21.12 39.00 46,38	ER OAM) sins			12.9 6.28 8.19 16.19	5.2 5.67 7.54 16.44 25.77 29.77 36.77
NATE OF SURVEY		BASIN (Cont	Jun 1504 Nov 1910 May 1915 Dec 1932 Jan 1940	(BELDW HDOV la River Ba		BASIN	Feb 1941 Feb 1935 Jan 1937 Jan 1947	1941 Dec 1914 Oct 1916 Sep 1925 Jan 1939 Jan 1946
DPALVA JE AREA IN SQUAPE MILES	FFT	UPPER PECOS RIVER BASIN (Cont'd)	12,600 12,600 12,600 12,600	CDLORADO RIVER RASIN (RELDW HOOVER OAN) Williams & Lower Gila River Basins		GILA RIVER BASIN	006.11 006.11 hpp.	0.69 5,760 5,760 5,760 5,760 5,760
DFAIPA IN SQUAF	TOTAL	UPPE	16,985 16,985 16,985 16,985 16,985	CDLORADO			1,450 12,900 12,900 12,900	0.69 5,760 5,760 5,760 5,760 5,760
NEAREST TOWN			Carlstad, New Mex 00 50 00 00 00				Phoenix, Ariz 61nbe, Ariz	Globe, Ariz (Globe, Ariz (Globe, Ariz (Globe)
STREAM			Pecns R				Aqua Fria R	Salt R. and Tonto Cr.
RESERVOIR			ръ-ц Labe неміlan				Lake Pleasant Aqua Fria R San Carlos (Conlider 0.; fills R Proposition 1000 Proposition 100	
DATA SHEET KURPER			th - 80		-69		60-1	

LITTLE COLORADO ANO SAN JUAN RIVER BASINS

CDLORADO RIVER BASIN (HALLS CROSSING TO HDOVER DAM) Virgin River Basin

CDLDRADO RIVER BASIN (ABOVE HALLS CROSSING) Gunnison, Dolores and Fremont River Basins

63

62

19

GREEN RIVER BASIN

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	1111111111		1		100 100 100 100 100 100 100 100 100 100	
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	0.02 0.14 0.25 1.25 0.16 0.32 0.32		 	0.42	0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
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SEVIFR RIVER BASIN	00:4 1940 8:00 1940 8:00 1940 8:00 1940 8:00 1940 8:00 1940 8:00 1940 8:00 1940 8:00 1936 1936 1936	T IN CALIF,	GREAT BASIN ,, and Truckee Riv Sen 1939	CREAT BASIN , and Mono Lake Di Seo 1939	COASTAL AL	
SEVIFR RI	4.9 11.95 506 900 9.92 23.4 6.9 1,009	HWESTERN PAR	GREAT BASIN Humboldt, Carson, and Truckee River Basins 112 Sen 1939 15	CREAT BASIN Onens, Walter, and Hono Lake Drainages O ½ 2,440 Seo 1539 4	RR CALIFORNIA 301 301 651 651 15.7 11.6 4.5 65.3 65.3 2.30 2.30 2.30 109.4 109.4 2.25 2.25	
	2 510 950 950 10 25 25 7 7 7 5,120	CREAT BASIN (NORTHRESTERN PART IN CALIF, NEV., AND ORECON)	Humboldt,	Ovens, 1	SALTON SEA AND SDITHERN CALIFORNIA COASTAL AND CREAT BASIN ORAINAGE 3.03 301 JUL 1934 16.3. 29,656 303 301 JUL 1946 29.5 38.595 718 651 JUL 1946 29.5 38.595 718 15.7 Mar 1936 31 1.6 15.7 Mar 1936 31 1.6 10.7 Mar 1939 2 1.7 Mar 1936 31 1.6 10.1 Mar 1939 2 1.7 Mar 1936 31 1.6 10.1 Mar 1939 2 1.7 Mar 1936 31 1.7 Mar 1936 31 1.8 Mar 1939 2 1.8 Mar 1939 2 1.8 Mar 1939 2 1.9 Mar 1939 31 1.9 Mar 1930 31 1.9 Mar 1930 31 1.9 Mar	
	Koosharen, Utah. Basuer, Utah. Sigure, Utah. Sigure, Utah. Shina, Utah. Perewan. Utah. Maryeville, Utah.	SR	Elkn, Mev	Shurz, Mrv	Brea, Calif Escondido, Calif Elsinner, Calif Hollywood, Calif Hollywood, Calif San Ferrando, Calif San Ferrando, Calif Orange, Calif Orange, Calif Insanger, Calif Paraden, Calif	
	Bankyhole Cr Indian Cr Bankor K Sevier R Skutumah Cr Pio Cr Polo Cr Sevier R		WIII ON CF	Walker	San Disquito Cr. San Disquito Cr. San Jasinto Bo. San Jasinto Cr. Triunto Cr. Stree Capyon Cr. Bouguet Cr. Tib of San Jasinto Trib of San Jasinto Trib of Crewport Bay Arrelone Valley Trib of Person Cr. Trib of Crewport Bay Arrelone Valley Trib of Crewport Bay Arrelone Valley Trib of Crewport Bay Cr. Trib of Crewport Bay Arrelone Valley Trib of Crewport Bay Cr. Trib of	
	Snaby Male. Indian Creek '00. I. Indian Creek '00. I. Rock Ford Patter Brida.		Willow Greek	Weber	Lake Modues. Lake Modues. 1000 Railroad Canyon Lake Sherwond Stone Canyon Stone Canyon Stone Canyon Stone Canyon Chatworth Chatworth Lake Memet Linguna Linguna Linguna Little Rock Little Rock Little Rock Little Rock Little Rock Little Rock Morena Horena Morena	
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* Estimated or assumed.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

SEDIMENT CONCEN- TRATION IN PPM BY WT		111											11									
	2	170																				
SED IN WULAT SUARF		2E1	27 t i	6 67 13	3 7 6 6	65	63	74 93 41	42 58	22 58 32	24 35	37 68 2		3 45	89 56	000	116 119	833	99 47	90 20 20 20	45 26	37 33 13
	É		3.2 0.41 18.7 17.9	il cil cil cil ci	الماماد	i i i i i	101	انداندان		cilci	010	2/ 1.68	i cil cil c	2, 2,								200
AVERAGE ANNUAL STORAGE LOSS IN PERCENT		0.15	0.227 5.7 5.7 5.4	20.00	8.7.8	3.7	0 0	2.3	1.38	0.65	1.35	2.9	11	0.092	2.47	2.83	4.52 4.52 3.87	3.40	3.55	3.50	2.80	3.06 2.80 2.80
SPECIFIC WEIGHT IN LBS (DRY) PER CU FT		*09		1111	:::	: : :	1 1 1	111			111	111	11			11		11	1 :		1 1	111
INITIAL CAPACITY- WATERSHED RATIO IN AC FT PER SQ HII			329	1 0	329 329 					92		79		540 265		127				76		
AVERAGE ANNUAL RUNOFF IN ACRE FEET	BASIN DRAINASE (Cont'd)	93,800	3,400 32,630 25,630	22,170 28,200 26,370	27,270	155,800 202,800	186,300	11,900	80,638 124,069	99,557	5,690 5,080 5,600	5,650	4,180 3,540	2,040	266 833 1.040	1,050	3,839	4,451 5,162	5,225	18,350	16,570	20,710 22,000 23,600
LENGTH OF RECCRD IN YEARS			3.0 3.0 1.5 1.0	0.0000	12.4	0.88	8 6 5	13.9	4.2 4.9	13.2	17.1	22.1 6.2 8.3	13.0	13.0	8.1 8.1	7.9	s = c	6.0	17.2	 	8.7	13.0
DATE OF SHRVEY	A"O GREAT	Mar 1940 Jel 1941 Oct 1943	Nov 1945 Cot 1949 Jan 1936 Apr 1938 Nov 1939													Det 1944 Feb 1935						Feb 1943 Abr 1943 Jun 1944
AREA	SOUTHERN CALIFORNIA COASTAL A"O	146	23.1 39.0 39.0	39.000	39.0	242	242 242 242 242 243	242 242 200	210.7	16.1	1.91	16.1	2.6	1.0 4.5	 	10.8	0.00	10.8	8.80	82.2 82.2	82.2	82.2 82.2 82.2
DRAINAGE AREA N SQUAPE MILE	A1,1F98																					
DRAINAGE IN SQUAPE TOTAL	SOUTHERM C	11.6 741 741	23.4 39.2 39.2	300.000	39.2	203	203	203	211.3	211.3 16.2 16.2	16.2	18.8	8 8 8	32.2 4.5	T T T	10.8	200	10.8	8.00	82.3 82.3	82.3	82.3 82.3 82.3
OWE	SALTON SEA AND	lif Calif.	calif									::: ::::		 								
NEAREST TOWN	SALTO	Arlington, Calif San Fernando, Calif	Fullerton, Ca Azusa, Calif.	000		000	000	Azusa, Celif.	000	San Pimas, Cal	00	San Oimas, Cali	00	San Dimas, Ca Glendora, Cal	00	Arcadia, Cali	00		000	Sunland, Cali		000
STREAM		Mockingbird Canyon Tujunoa Gr	Area Cr. 990 San Gabriel R	00 00 00 00	San Sabriel R	000	000	DO. San Gabriel R	00	San Dimas Wash	000	San Oimas Cr.	600	Puddingstone Cr	00	Santa Anita R	00	000	00	Ria Tujunga Cr	00	
	-																					
RESERVOIR		Mockinabird Canyon Hansen F.C. Rasin	Area F.C. Rasin	000	San Gabriel Dam #1	000 000	00	00 00 Morris 0am	000000000000000000000000000000000000000	San Oimas Pasin	000	Puddingstone Diversion	000	Puddingstone Oam	000	Rig Santa Anita	000	.00	00	Rig Tujunga Oam		00
DATA SHEET PUNBER		70-17	70-19		70-21			70-22		70-23		70-24		70-25		70-27				70-28		

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70-29	70-31 70-32 70-33	70-35 70-35 79-38 70-39	70-40 1/ Pra

^{1/} Practically all sediment inflow is passed downstream by sluicing operations.
2/ Deposition, if any, in years of sluicing is not included in the summation.
3/ Includes Sam Gabriel Dam #2 drainage area as sediment is sluiced into Sam Gabriel Dam #1 drainage area.
4/ Obbris excavated at various times.
Estimated or assumed.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950

SEDIMENT CONCEN- TRATION IN PPM	BY WT
AMNUAL IENT ION PER	TONS
AVERAGE AMNUAL SEDIMENT ACCUMULATION PE SQUARE MILE	AC FT
AVERAGE ANNUAL STORAGE LOSS IN	PERCENT
INITIAL SPECIFIC AVERAGE SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT CONCEN-WATERSHED LGS (ERY) STORAGE SQUARE MILE TRATION PER TRATION NA C. T. PER 10SS IN PPM	CU FT
INITIAL CAPACITY- WATERSHED RATIO	PEP SQ MI
A A 15 ;	FEET
LENGTH OF RECORD IN	YEARS
DATE OF SUPVEY	
DRAINAGE AREA N SQUARE MILES	FET
DRAINA IN SQUA	TOTAL
MEAREST TOWN	
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SALTOM SEA AND SOUTHERN CALIFORMIA COASTAL AND GREAT BASIN DRAINAGE (CONTID)

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Debris Bas				Fable Debris Basin	po		0.0			po				Fairnaks Debris Basin.	00			000		00	po	po		Fern Debris Basin			00	00	00	po	DQ			Ganld Debris Basin	Haines Debris Basin	p0	06	00			00	00	0.0	bris Basın	000	00	D0		000			00	
70-40 Dunsmuir Debris Basin. Contd)00				Fable Deb										Fairnaks										Fern Debr																				Hall's De									
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70-47	70-48	7c-43	70-50	70-51	70-53	7c-54

1/ Debris excavated at various times. $\overline{2}/$ Orainage area 0.84 Sq. M. to 1945 - 1.06 Sq. M. beginning 1945.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950 SUMMARY OF

SEDIMENT CONCEN- TRATION IN PPM	PY WT
AVERAGE CAPACITY— SPECIFIC AVERAGE SEDIMENT CONCEM- COPD RINGF WATERSPED LPS (DRY) STORAGE ACCUMULATION PER TRATION IN ACRE.	1
AVERAGE A ANNUAL STORAGE AC LOSS IN	PEPCENT
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33 32	YEAPS
DATE OF SURVEY	
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SALTON SEA AND SOMTHERN CALIFORNIA COASTAL AND GREAT RASIN DERINAGE (Contid)

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13.3 1.0 1.0 1.0 1.00 1.027 1.007 1.027 1.007 1.	5.9 6.722 8.56 8.056 1.80 1.01.5 0.31 1.20 1.20	KLAMJTH, ROGUE ANO UMPOJUA KIVER BASINS LOWER COLUMBIA RIVER BASIN ANO PACIFIC COAST BASINS IN NORTHERN OREGUM	337 126 186 104	IN (GRAND COUL Yakima, I, 100
San Francisco, Calif Atascadero, Calif Hollister, Calif Santa Hargarita, Coppercoolis, Calif	Weiah, Calif. Willis, Calif. French Town, Calif. Sacramento, Calif. Camptonville, Calif. Stony Ford, Calif. Calif. Corning, Calif. Chico, Calif. Chico, Calif. Elk Greek, Calif.	TOMER COL	Underwood, wash Portland, Ore Pendleton, Ore Cottage Grove, Ore	COLUMBIA RIVER BASIN (GRAND COULEE TO UMATILLA) AND PACIFIC COAST DRAIMAGE IN WASHINGTON Yakima. Chelan and Okanogan River Basins Bellingham, wash 1,100 Jul 1936 6 81.1
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Atscadero Park Lake. Atscadero Park Lake. Hawkins. Salinas. Cooperoopolis. Crane Valley. Crane Valley. Crane Valley. Crane Valley. Excheguer Exche	Ridgewood (Walker) Norris Norris Norris Bulgett Bullards Bar Combie (Van Geisen) East Park Eat Park L. (False L.) Gerber Magalia Stony worge		Condit (White Salmon). Lake Harriet (Dak Grove). HCKay. Cottage Grove.	Oiablo Skagit R
7 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	72-1 72-2 72-3 72-4 72-6 72-6 72-1 72-9 72-10	73	74-1 74-2 74-3 74-4	75-1

Obbris excavated to various times. Prainage area 6.15 sq. mi. thru 1997, 0.64 sq. mil after 1947. Prainage area 6.15 sq. mi. thru 1987. Oil 1923. Before construction of fon Pedro Reservoir in 1923. Excluding non-contributing areas above 3alt Springs and Bear River Reservoirs. Excluding 3 sq. mi. above P. G. & E. Canal. 一で「雨で」

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* Estimated or assumed.

RESERVOIR SEDIMENTATION SURVEYS MADE IN THE UNITED STATES THROUGH 1950 SUMMARY OF

DATA DATE DATE DATE DATE DATE DATE DATE		
RESERVOIR STREAM NEAREST TOWN NEAREST TOWN TOTAL RET TOTAL NET TOT	SECIMENT CONCENT TRATION IN PPM	BY WT
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RESERVOIR STREAM NEAREST TOWN TOTAL TOTAL NET	CAPACITY- WATERSHED RATIO	PER SO MI
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DRAINAGE AREA RESERVOIR STREAM NEAREST TOWN IN SQUARE MILES STREAM TOTAL NET	LENGTH OF RECORD	YEARS
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COLIMMIA RIVER BASIM (IMTERNATIONAL ROWN)ARY TO SRAWN COULEE) AND PACIFIC COAST DRAINAGE IN WASHINGTON Pendorielle, Spokane, Walla Malla and Lower Snake River Pasins

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COLUMBIA RIVER RASIN IN CAMADA

	;	;	1	173.3
	0.03	0.132	0.063	601.0
	0.026	68.0	0.013	0.087
	1	;	:	73
	011	13.7	h6h	128.7
RIVER)	1	1	}	1,572,509
NDE RONDE	55	12	42	32.64
HILL TO GRANDE RONDE RIVE	Jun 1947	Jun 1936	Jun 1947	0ct 1947
N (FROW KING	42.8	2,540	* 91	2,170
NAKE RIVER PASIN (FROW KING HI	H3	2,750	* 5	2,211
SNA	Boise, Idaho	Emmett, Idaho	Roise, Idaho	Boise, Idaho
		ayette R	Black's Cr	Soise R
	Orchard Indian Cr	Rlack Canyon Payette R	78-3 Pleasant Valley	78-4 Arrowrock (Roise Proj) Boise R
	1-82	78-2	78-3	78-4

173.5

SHAKE RIVER BASIK (AROVE VING HILL) AMD SALMON RIVER BASIN

73

NAME OF RESERVOIR

DATA SHEET NO.

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10		. STREAM BED EI		d.	(ira		OP OF DA	NUI	kirk, N.M	CV	Dati.	Miguel st ELEV. 4218
-	-		100	51.514.	T. O. II	12.0		13.	1,21,0	1		15 DATE STORAGE
ı	-	STORAGE ALLOCATION	1	ELEVA OP OF		30	RFACE ACRES	1-7.	STORAGE ACRE-FEET	1 70001	MULATED -FEET	BEGAN
1	a.	. FLOOD CONTROL		4218		13.	71 ビ	20	1,834	601	,112	
≃	b.	. POWER		4620			1-2	1			,	1 Jan 1939
12	c	. WATER SUPPLY										16 DATE NORMAL
RESERVO	d.	. IRRIGATION										OPER. BEGAN
≅	e.	. CONSERVATION		4201		10,	073	29	6,412	399	278	
н	f	. INACTIVE		4155			5.20		2.866		866	Jan 1939
	-	7. LENGTH OF RE						AV. WID	TH OF RESERVO	1R 1200 (ontour	. 0.75 HILES
1	18	8. TOTAL DRAIN		7,3		<u> </u>	SQ.MI.	22. MEA	N ANNUAL PREC		(38 vrs	
I E	19	9. NET SEDIMENT	T CONTRIBUT			. 950	SQ.MI.	23. MEAI	N ANNUAL RUNC		51, 3/	INCHES
WATERSHED	20	O. LENGTH	LOO MILES	SIAV.		73	MILES	24. MEA!	N ANNUAL RUNC		s) 213	100 ACFT.
K	I-	1. MAX. ELEV.		+	ELEV.				MATIC CLASSIF		Semi-a:	
	_		27 PERIOD	28 · A		TYPE OF		F RANGES	31. SURFACE	Tan	APACITY	33. C/W RATIO
1		SURVEY	YEARS	Ŷ	EARS	SURVEY	OR CONT	OUR INT.	AREA ACR		RE-FEET	AC-FT. PER SOML
	7	Jan 1939				ontour	10	fee t	13,715	601,1	12	82
ш		May 1940	1.4		1.	Range		ranges		599,7		82
L		June 1942	2.1	3,		Range		ranges		585,1		80
Н		Nov 1942	•4		_	Range		ranges		581,1		79
		Oct 1944	1.9			Contour	10	feet	13,349	576,7		78
1		Feb 1949	4.3	10	-1 (Contour	10:	feet	13,552	566,1	L63	77
	20	6. DATE OF	34. PERIO		35.	PERIO	D WATER	INFLOW	ACRE-FEET	36. WAT	ER INFL.	TO DATE ACFT.
	L	SURVEY	PRECIPITA	TION	a. MEA	N ANNUAL	b. MAX.	ANNUAL	c. PERIOD TO	TAL a. MEAN	ANNUAL	b.TOTAL TO DATE
		May 1940	14.26						114,26			114,264
		June 1942	22.40		65	2,279	963,	370	1,369,78		5,485	1,484,050
		Nov 1942	12.50						457,28		878	1,941,338
1		Oct 1944 Feb 1949	14.32		7.0	2,942	154,	702	235,60 528,65		1,919 5,536	2,176,941 2,705,592
DATA		reo 1949	15.00		12	2 9 7 4 2	1549	102	920,09	200	اررور	2,100,000
	\vdash											1
JRVEY	20	6. DATE OF SURVEY			-	DEPOS ITS			-			TE ACRE-FEET
2	-			OTAL	b. AV.	ANNUAL	C. PER S	5Q.MIYR.				c.P.ER SQ.MIYR.
		May 1940	1,400		,	~~~	- 0	00	1,400	1,00		•144
	L	June 1942	14,600		6	,952	1.0	00	16,000	4,7		•677 •757
		Nov 1942 Oct 1944,	4,000		2	,290	2	30	20,000	5,20	80 80	.615
		Feb 19494			2	,460		54	34,950	3,40	60	498
		100 1/4/_	(11,250))		,610)		76)	(35,600)			(.506)
	20	6. DATE OF	39. AV. DRY	WGT.	-	DEP. TON			41. STORAGE			D. INFLOW PPM
	-		LBS. PER C	0.71.	a. F	PERIOD			a.AV.ANNUAL		a . PERI	
		May 1940	75.7		,	61.0		255	.17	•23	14,86	
		June 1942	75.7		<u> </u>	,648		116 248	•78 •88	2.66 3.33	12,93	
							1.0	2410	• 00	J•33	1 70 07	6 I 16 a 11 7 U
		Nov 1942	75.7			5).).					22 112	
		Oct 1944,	75.7			544 544	1,	014	•71	4.05	22,42	9 13,573
			75.7			544 584 (620)	1,				22,42 24,32 (25,81	9 13,573

DATE OF SURVEY May 1940 June 1942 Nov 1942 Oct 1944 Feb 1949	178-128		-8888	3 - 68	68 - 58	58 - 4	8 48	-38	LOW, CR 38-28	28-17	ATION	et co's	T-12			
May 1940 June 1942 Nov 1942 Oct 1944							8 48	- 38	38 - 28	28-17	117-CP	CTADO	2T_10			
June 1942 Nov 1942 Oct 1944		P	ERCENT	78-128 128-108 108-88 88-68 68-58 58-48 48-38 38-28 28-17 17-CR'ST CR'ST-12 PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
June 1942 Nov 1942 Oct 1944					L SEDIN	MENI L	CALE	MITM (IN DEPT	H DESIGN	ATION	-1-				
	16 13	14	7 :	10	6 5	10 7	1		16 14	16 14	16		2			
6.	44. REA	CH DESIGNA	TION	PERC	FNT OF	TOTAL	ORIGI	NAL I	FNGTH O	F RESERV	OLR	1				
DATE OF SURVEY		-20 20-30	30-40	40– 50 5	0-60	50-70	70–80	80-90	90-100	-105	-110	-115	-120 -125			
		.007			1	MENT L	CATED	WITH	IN REAC	H DESIGN	ATION		-			
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June 1942	(720 F	3 / 4 /12	-12	122 13	(1), (27	<i>+</i> 5		/ 2	Conch	Canad as An	m					
Nov 1942	(7 6 7 (- 1	2 /5 0 /1	+ 8 + 2	/16 . , /19 ,	157		/16 /14	<i>≠</i> 2 <i>≠</i> 3	5	Canadas Am		Arm				
Oct 1944 Feb 1949			, -				7-4	70	Jones	as All			,			
5.	1		R	ANGE IN	RESERV	VOIR O	PERATI	ON	٠	<u></u>			1			
WATER YEAR	MAX. EL	EV. MIN.	ELEV.	INFLO	W ACF	T. WA	TER YE	AR	MAX. EL	EV. MI	N. ELE	v. 1	NFLOW ACFT.			
1939 (9 mo 1940 1941 1942 1943 1944 (The April	4154 4206 4208 4200 4201	4153.10 993 4197.75 1,147 4197.86 172			2,956 8,836			4201.13 4202.46 4201.46		4199.00 4195.63		97,957 -37,573 -29,329 -54,702				
the time	since t	hat date	e with	over	flows ber l	res	ultin	ng f								
6. ELEVATION	ADEA	CARACITY		LEVATION			_			VATION	40.5		CAPACITY			
ELEVATION	Acres	Acre-fee		VALION	Acr			e-fe		AITUN	Acre		cre-feet			
4218 1 4201 4190	6,396 -3,552 9,593 7,666 6,123	746,091 566,163 370,185 275,641 206,909	- 4 3 4 5 4	170 160 150 110 130	4,9 3,7 2,8 2,1 1,5	17 74 92 53	151 108 75 50	,721 3,479 6,309 1,150 1,82	70 70 71 71 71 71	20 10 90 73•5	1,03 67 25	8	19,094 10,610 1,847 0			
.7.Report:	River.	m Report New Mex	cico,	Septe	mber	1943										
7. REMARKS AN following a MIT Classi: Percen 1/This a 2/Conchato into 3/This file. 8. AGENCY SUP	gradation fication t rea has s Arm, l ercept a igure at	n <u>Clay</u> 3 not been 13.8 mile at elev.	Fine No. 114 n subces. 14230 by war	Medium Silt 19 divide In each	Sil 21 ed. ch cas	se, l	Fine Sand 17 eng the	Me S ns a	dium and 5 re tho	Coarse Sand I ose alc	e - ong on	rigi:	nal channe			

RESERVOIR SEDIMENTATION DATA

NAME OF RESERVOIR

DATA SHEET NO.

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DAM	4. S	EC. T	WP.		RANG	E		5. N	EAREST T	OWN		6. COUNTY						
	7. S	TREAM BED EL	EV.					8. T	OP OF DA			9. SPILL						
	10.	STORAGE			ELEVAT OP OF		12.		RFACE ACRES	13.	STORAGE ACRE-FEET	14	ACCOUNT	JLATED -FEET	15 DATE STORAGE BEGAN			
	2 6	LOOD CONTROL			77 07	7001	-	ANEA	ACRES		AUNT-LET	-	ACRE-	,	DEGAII			
œ												-						
107	C. W	POWER VATER SUPPLY RRIGATION					+								16 DATE NORMAL			
SEF	d. 1	RRIGATION													OPER. BEGAN			
~	e. C	CONSERVATION																
	f. 1	NACTIVE																
	17.	LENGTH OF RE	SERV	OIR					MILES	AV. WIDT	TH OF RESERVOIR MILES							
0	18.	TOTAL DRAINA	AGE A	REA							N ANNUAL PREC		TATION		INCHES			
SHE	19. NET SEDIMENT CONTRIBUTING AREA								SQ.MI.	23. MEAN	ANNUAL RUNO	FF			INCHES			
WATERSHED	20. LENGTH MILESIAV. WIDTH								MILES		ANNUAL RUNO				ACFT.			
3		MAX. ELEV.				ELEV.			00		ATIC CLASSIF				22			
	26.	DATE OF SURVEY	2/ · P	ERIOD YEARS	28 · AC	CL.	29. TYP	E OF	OR CONT	RANGES 31. SURFACE AREA ACRES				ACITY E-FEET	33. C/W RATIO AC-FT. PER SQ.ML			
	-	SURVET		CNAJ		AILO	301	,,,,,	OIL CONTI	00K IVI.	ANEA ACRE		ACINI		TEN OQUITE			
								10										
								- 3		1								
										1								
	26.	DATE OF	34.	PERIO		35.	Р	FRIO	D WATER	INFLOW A	ACRE-FEET		36. WATE	ER INFL.	TO DATE ACFT.			
		SURVEY	ATE OF ANNUAL									TOTAL a. MEAN ANNUAL b. TOTAL TO DATE						
													:					
YY																		
SURVEY DATA																		
RVE	26.		37.						ACRE-FE						TE ACRE-FEET			
SU		SURVEY	a. P	ERIOD T	OTAL	b. AV	. ANNU	JAL	c. PER	Q. M IYR.	a.TOTAL TO D	ATE	b. AV.	ANNUAL	c.P.ER SQ.MIYR.			
,	26.		39.			40.55	D 050	TON	S DED C) MI. VD	41. STORAGE	100	SPCT	42. SE	D. INFLOW PPM			
		DATE OF SURVEY	LBS.	AV. DRY	₩GT.						a.AV. ANNUAL				OD b. TO DATE			
1						7		T										
		14																

26.	DATE OF	43.	DEPTH D	ESTGNA	TION	RANGE	E IN FEET	ADOVE, A	NO DELO	W, CRE	SI ELEV	ALION			
	DATE OF SURVEY			P	ERCENT O	F TOTAL	SEDIMENT	LOCATED	WITHIN	DEDTH	DESIGN	ATION			
					ERCENT	FIUIAL	. SEUTPILIT	LUCATED	WITHIN	DEFIN	DESTU	ALION			
									1						
							3								
26.	DATE OF	44.	REACH D				ENT OF TOT								
	SURVEY	0-10	10-20				0-60 60-7 SEDIMENT						-115	-120	-125
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45.		1			RA	NGE IN	RESERVOIR	OPERATI	ON	i		1			
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46.							-AREA-CAP								
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	VATION	AREA	_ CA	APACITY						ELEV	ATION	ARE	A	CAPACI	ΙΤΥ
	VATION	AREA	_ CA	AP ACITY						ELEV	ATION	ARE	A	CAPACI	ITY
	VATION	AREA	CA	LP ACITY						ELEV	ATION	AR E	A	CAPACI	ITY
	VATION	AREA	CA	APACITY						ELEV	ATION	AR E	A	CAPACI	ITY
	VATION	AREA	CA	AP ACITY						ELEV	ATION	ARE	A	CAPACI	ITΥ
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47.) REFER	RENCES	APACITY							DATE	AREA	A	CAPACI	ITY

RIVER BASIN MAPS

"Data Sheet No.





